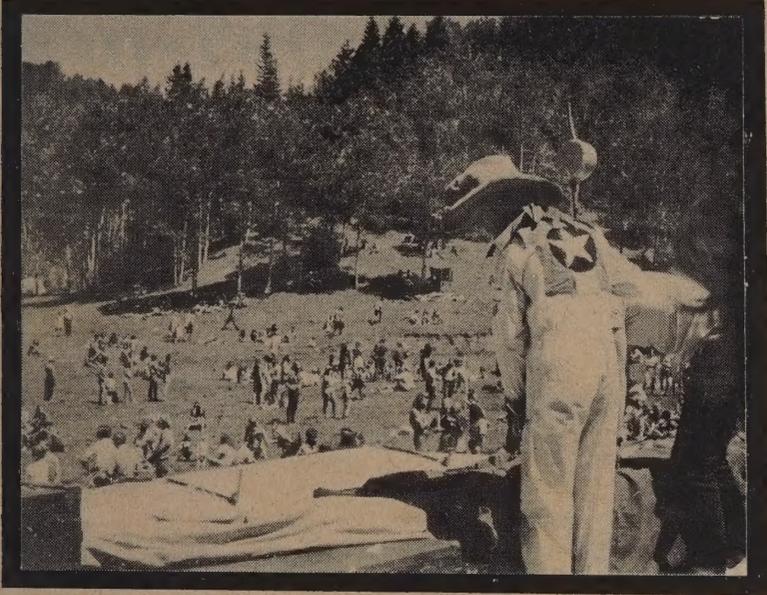


Difficult But Possible

\$1 July 1969

SUPPLEMENT to the

WHOLE EARTH CATALOG



At the starting line Hugh Romney mounts his bus.



Feverish last minute preparations aboard Further.

THE GREAT BUS RACE

Winning Time 2:32. Who Won Is Debated.

Aspen Meadows, New Mexico. Summer Solstice, 1969

Hugh Romney, who mustered this 1000 in this mountain pasture, is announcing the start of the Bus Race and that a couple named John and Mary are somewhere around and must be found because they have the bubonic plague and require inoculation immediately. Everybody's pretty inoculated already; it's the spiciest part of the afternoon. The race was going to be one bus at a time against the clock, but Ken Kesey and others are maintaining that's a chickenshit race. It's got to be all at once.

The buses are Kesey's renowned Further, with a skeleton crew of Farmsters aboard, and the Hog Farm's fleet: Road Hog, Hospital Bus, Kitchen Bus, etc. The Motherfuckers' tight little bus is around but not in the race.

Everyone will go one trial run around the course: ¼ mile up the meadow, around the flag, and back downhill to the starting line. Majestically the line of buses staggers up the course. "I don't know about this," says Mike Hagen, "Further ain't got much brakes." The Hospital Bus is stalled half-way up the hill right where it's almost impossible to get around. Reportedly it also ran over a pup tent (unoccupied).

The survivors of the trial run line up. They're immense, these faded colorful wrecks filled with folly. People are climbing off, others are climbing on. It's a test of passengers as much as drivers. The mood is pure: fatalistic optimism.

And it's begun. Road Hog gets off first. Further is dragging. The air is filled with buses and exhaust and din. They wallow up the pasture like berserk pigs. As Further sways past the grounded Hospital Bus Kesey disappears over the windshield shouting orders to driver Bucavich. Over there in the bushes the Foot Swami from India is watching it all go by.

Further approaches the flag from the left. The Kitchen Bus with Romney on top is coming around the other way. They intersect, pass narrowly, and ram into opposite hillsides, then rev and back blindly toward each other. Frantic shouting gets them forward again. For a moment the entire solstice is tied in a sweet mad knot at the top of the pasture.

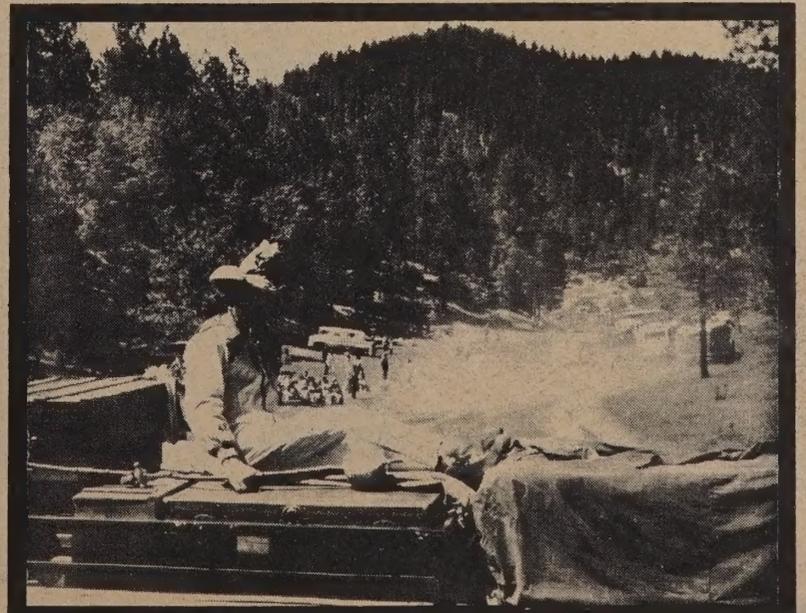
Bucavich gets Further around. The Kitchen Bus is still hung with a rear bumper gouged in the creek bed. Rocket, who's driving, surges again and gets it free. The buses swarm downhill. Hugh Romney's mouth is wide open, his toothless warning wailing down the pasture, "BEEEE CARRREFUULLLLL." At the finish line a thousand longhairs cheer and dodge.

Afterward, at the award-giving argument, Romney is saying, "A miracle. It's a pure miracle nobody was killed." Kesey is saying, "Two minutes thirty-two seconds. It's something to think about for next year."

Further ain't got much brakes.



Barrelling toward the first turn Kesey has an excellent view of the rear of the Hog Farm fleet.



Tied up at the flag, Romney and Further pass in opposite directions. Fierce bus action is visible on the track below.

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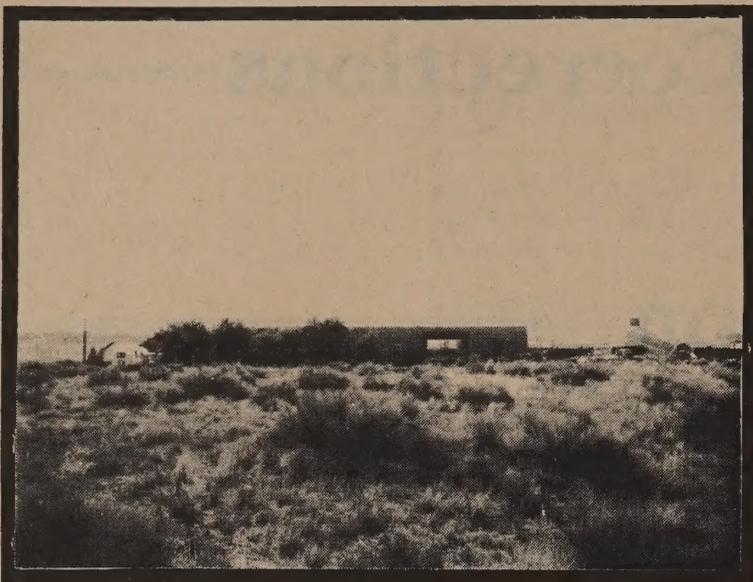
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CATALOG procedure



Ordering from the CATALOG

- ➔ Address orders to the supplier given with the item (unless you know of a better one; if you do, let us know).
- ➔ If the price listed is not 'postpaid', consult post office or express agency for cost of shipping from supplier's location to yours.
- ➔ Add state sales tax if transaction is within your state. (California sales tax is 5%.)
- ➔ Send check or money order with your order.

Blank order envelopes are provided at the back of the CATALOG for your convenience and so that suppliers have some idea of the CATALOG's effect on their business—if strong enough it may result in price or service advantages to CATALOG users.

If the supplier gives you poor service, let us know. That information can be added to his review.

With some indicated items the CATALOG also will ship. There is no price difference with the service; the CATALOG gets the markup instead of the other guy, is all. For west coast orders it may mean faster service.

Generally, the closer the supplier is to you, the quicker and cheaper the shipping will be. If the item you're getting is delicate or if you are in a hurry, air express is a good deal. Anything overseas do by air, unless you want to wait a month or so for delivery.

Subscribing to the CATALOG

\$8.00 per year. This includes fall and spring issues of the CATALOG and four Supplements. Subscription forms are at the back. Memorize your zip code.

Suggesting and Reviewing

The validity of the information in the CATALOG is only as good as the transmitted experience of users. What would you add to the current CATALOG?

The CATALOG pays its reviewers \$10 an item for: getting familiar with the item, its usefulness, and its competition; evaluating the item; selecting samples of graphics or text (with page references) for the review; writing a 100-300 word review.

Reviewers and first-suggestors of items are credited in the CATALOG. When requested, the reviewer's or suggestor's address may be included.

We invite reviews that improve on present reviews or accompany suggestions for new items. On acceptance for publication reviewers are paid \$10 per accepted review. Unused reviews are not returned. Appearance of submitted material doesn't matter unless it is meant to be camera-ready.

Corresponding

Commentary from CATALOG users that is of general interest, and not a specific review, is published in the Supplement. Critical comments, new design processes, no-cash techniques, news of specific enterprises, useful fantasies, design student work, time and trouble shortcuts, new uses for common or exotic materials, other realms for the CATALOG to consider, &c., &c. — welcome.

Donating

Portola Institute, Inc. is a tax-exempt, non-profit corporation. Donations to Portola or the CATALOG may be deducted. Retaining subscriptions to the CATALOG are \$25 for one year (\$17 tax deductible). Sustaining subscriptions are \$100 + per year (\$92 + tax deductible). Names of retaining and sustaining subscribers are given in the CATALOG.

Gifts and Informal Resale

CATALOGs and supplements are available in quantities of 5 or more at 25% discount. Thus you can get 5 CATALOGs for \$15, sell four, keep one, and come out \$1 ahead. There is no quantity discount on subscriptions.

Formal Resale

At present the CATALOG and supplement is distributed by Book People, 2010 7th St., Berkeley, CA 94710 (415 549-3033). Terms are 39% in Northern California, 40% elsewhere (The difference is to help offset shipping costs).

Advertising

Suppliers, manufacturers, creators of listed items are eligible to advertise in the CATALOG. They may advertise only an item listed or their own catalog. All ads are placed at the back of the book. There are no ads in the Supplement.

Advertising rates:

full page \$200	\$75	
	\$25	\$10
		\$5

CATALOG Policy with Suppliers and Users

The CATALOG is under no obligation to suppliers. Users are under no obligation to the CATALOG.

Suppliers (manufacturers, creators, etc.) may not buy their way into the CATALOG. Free samples, etc. are cheerfully accepted by CATALOG researchers; response not predictable. No payment for listing is asked or accepted. We owe accurate information exchange to suppliers, but not favors.

Our obligation is to CATALOG users and to ourselves to be good tools for one another.

This issue of the Supplement was prepared in the living room of Steve and Holly Baer near Albuquerque, New Mexico. It was put together by:

Stewart Brand
Joe Bonner
Annie Helmuth

with
Steve Baer
Day Charoudi
Ed Heinz
Berry Hickman
Buck Dant
Holly Baer
Roland Jacopetti
Sid Sheehy
Gurney Norman
Ed Rosenfeld

Libre
Roger Knights
Lloyd Martin
Kieth Gilbert
Stephanie Mills
Cary James
Marc Estrin
Tracy McCallum
Terry Link
John Christian
John Ross
John Holt
Oscar Firschein
Charles Tilford
Paul Foster

Buncie Shadden Di Gesu
Jude Harris
(lost his name)
Margot Patterson Doss
Peter Rabbit
Mu
Lloyd Kahn
Wes Wilson
Bob Ploss
Gregory Yob
San Francisco Good Times
Paul Prensky & Joyce Gardner
Chip Chappell
ONYX
Droppers

Nancy Buckey Press
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Lai Ching
Larry Schwartz
Larry Kafka
San Francisco Mime Troupe
Moving On
San Francisco Chronicle
Lewis Herber
Fritz Zwicky
National Fisherman
American Avator
SRI
Intersection Newsletter
Jeff Berner

Technology Review
Clearinghouse
Explorations
Dick Baker
Peace Corps
Modern Plastics
Ant Farm
Berkeley Barb
Ed Denson
Bill Dickinson
Life Magazine
Bob Lander

The **WHOLE EARTH CATALOG** and **Difficult But Possible Supplement** is published at Portola Institute, 558 Santa Cruz, Menlo Park, California 94025 on the following schedule:

CATALOG — November	CATALOG — May
Supplement — January	Supplement — July
Supplement — March	Supplement — September

Preparation of the Supplement was done on an IBM Selectric Composer and a Polaroid MP-3 camera with instant half-tone system. Nowels Publications, Menlo Park, did the printing.

Spring 69 CATALOG Corrections

If You Didn't Get Your CATALOG

Post Office employees have been coping CATALOGs and passing them around among themselves, leaving out hapless subscribers. All we can do is bitch and moan to the post office and apologize to subscribers. One guy in a Bay Area post office called us enthusiastically: "Listen. We see a lot of groovy stuff that comes through the mail. I'll get a bunch together and send it to you."

By UPS presumably. (Actually UPS ain't so hot either. It's gotten to where we hand-carry CATALOGs to Book People rather than ship.)

p. 3 An Operating Manual for Spaceship Earth

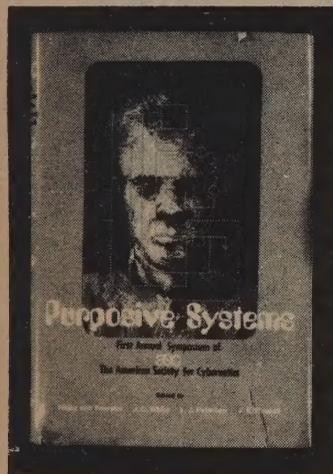
The hardcover book *An Operating Manual for Spaceship Earth*, Buckminster Fuller's most recent book, costs \$4.25 from Southern Illinois University Press.

For \$4.95 you can get a paperback called *Environment and Change* which has an identical 'Operating Manual' along with 24 other futuristic articles, including fine pieces by R. G. H. Siu, John R. Platt, Herman Kahn, Robert Theobald, Gunnar Myrdal, David Buzelon, and John Turner.

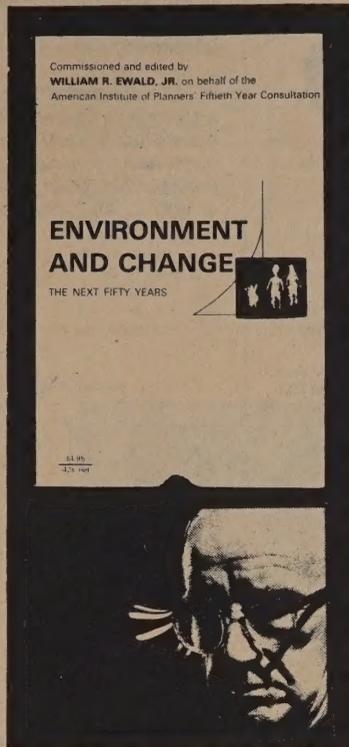
All this was at an excellent conference of the American Institute of Planners organized last year by William Ewald. The planners were a drag (I happened to attend this conference), but the talks, exhibits, performances were not. I only regret that Ewald didn't design this book, which is 397 visually drab pages.

p. 16 Purposive Systems

The price of *Purposive Systems* was incorrectly given as \$6.50. Sorry, it's \$10.00.



from
Spartan Books
432 Park Avenue South
New York, N. Y. 10016
or
WHOLE EARTH CATALOG



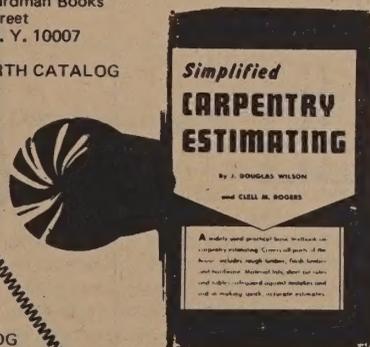
from
University of Indiana Press
P. O. Box 369
Bloomington, Indiana 47401
or
WHOLE EARTH CATALOG

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Simplified Carpentry Estimating

has escalated from \$4.25 to \$ 5.95.

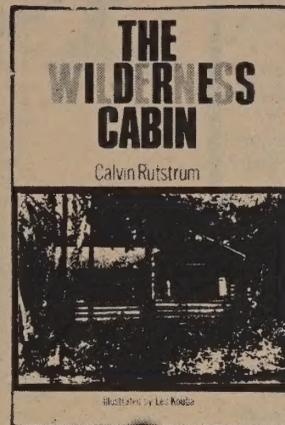
from
Simmons-Boardman Books
30 Church Street
New York, N. Y. 10007
or
WHOLE EARTH CATALOG



p. 26

The Wilderness Cabin

isn't \$4.95 any more.
It's \$5.95.



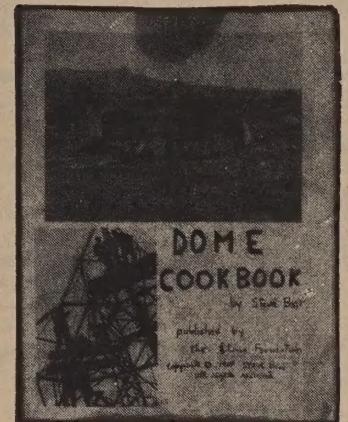
from
The Macmillan Company
Front and Brown Streets
Riverside, N. J. 08075
or
WHOLE EARTH CATALOG

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Dome Cookbook

Get your *Dome Cookbooks* (\$1 postpaid) from

P.O. Box 422
Corrales, N. M. 87048
or
WHOLE EARTH CATALOG



p. 106

Hitch-Hiking in Europe

Ed Buryn would like customers to know that his book (\$1.75) is best available directly from him:

Ed Buryn
P. O. Box 31123
San Francisco, CA 94131

(or WHOLE EARTH CATALOG)

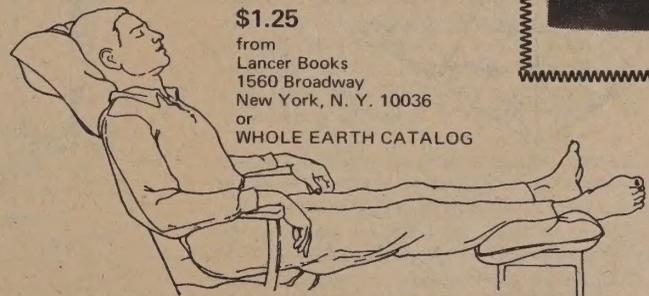


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Fundamentals of Yoga

is now in paper

\$1.25
from
Lancer Books
1560 Broadway
New York, N. Y. 10036
or
WHOLE EARTH CATALOG



Item - related Information

Lloyd Martin says

That Snap-On Tools are no better than Sears according to half the mechanics he's talked to.

That Meccano sets are available at Sears.

That Orchard Supply Hardware in San Jose (Calif.) carries the Corona Corn Mill.

That he's making Keysort System cards for \$8 per 1000, \$12 per 2000.

Lloyd Martin
432 Lakehouse Avenue
San Jose, CA

Fuller

By now you probably have copies of Bucky Fuller's new book: *Operating Manual for Spaceship Earth* (\$4.25, hardcovers, So. Ill. U. Press). I've been doing some work recently with Jerry Agel. His *Books* which you reviewed in the CATALOG is temporarily suspended. However Jerry has been busy. I do a lot of freelance work for him and am happy to report that his new book with Bucky and Quentin Fiore: *I Seem to Be a Verb* is just about completed and Bantam should have it out soon as a paperback.

The Fuller Dymaxion Sky-Ocean World folding globe kits are available to the educational market for \$1.95 per kit from Creative Education Society, Inc. For distribution arrangements contact Mr. George R. Peterson, Jr., President, 515 North Front Street, Mankato, Minnesota 56001.

The following is a quote from the forthcoming *I Seem to Be a Verb* by R. Buckminster Fuller, Jerome B. Agel & Quentin Fiore, soon to be published in paperback by Bantam Books. (page 83a):

"55-Nitinol, a nickel-titanium alloy, can be fashioned into a complex shape at a high temperature, then cooled and crushed beyond recognition. But it magically regains its original shape when it is reheated, 'remembering' every curve and angle. A radio telescope as large as a mile in diameter could be compactly packaged on the ground and sent into space to unfold when solar-heated."

I found this to be pretty wierd and fantastic. If you can get some more info on this why don't you run it?

Edward Rosenfeld
New York City

GPO Access

Friends

The Govt Printing Office is one of the most interesting places to go in Washington, and I spend time there whenever I can. I see no reason why I couldnt function as expediter for GPO stuff to Catalogue users.

If things begin to get out of hand, I'll signal.

Marc Estrin

Institute for Policy Studies

1520 New Hampshire Avenue, N.W., Washington, D.C. 20036

Send requests, money and self-addressed, stamped envelopes to me at the letterhead address, and I'll do my best and fastest.

Outdoor Supply Advice

Remarkable service:

The new Ski Hut catalog should be out in a couple of weeks, at which time I'll send you a bunch, and more thereafter should you need them. Rather than trying to indicate 'best buys' or anything like that, I'll just make an offer to any Whole Earth Catalog readers or, for that matter, to everyone. Let's say someone needs some gear, has ordered a whole bunch of catalogs, and is now trying to see through the hard sell to find out really what would be best for him to get. I invite anyone in this quandary to write me at the Ski Hut, describe his circumstances, budget, how and where he plans to use his equipment, etc. I know the products the Hut sells, and am fairly familiar with other people's stuff, too. I'll do the very best I can to make a personal and honest recommendation. I also urge groups of people to get together large orders, and I'll try to arrange the best discount I can. Down with impersonality in the mail order business! Long live the nineteenth century!

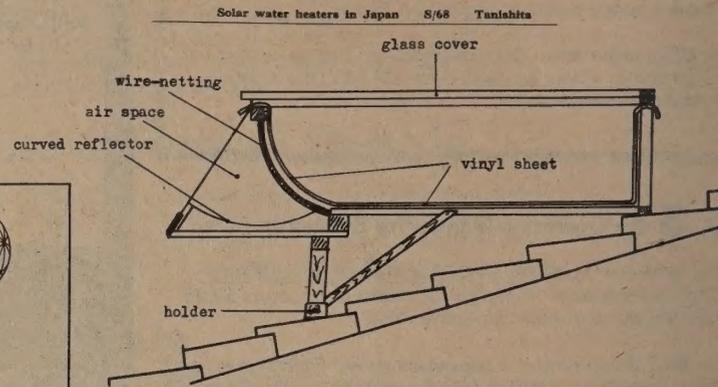


Write to:
Roland Jacopetti
The Ski Hut
1615 University Ave.
Berkeley, CA 94703

New Sources of Energy

Well, they aren't new sources; they're the oldest: sun, wind, earth heat (geothermal). But OK, to us they're new, and indeed they're exciting. The prospect of truly self-contained habitable energy systems is romantic country. There you are with your friends on your hill putting sun and wind through useful changes that are not only apparent to you but an integral part of your living. [This kind of thing is easy to understand and write about here at Steve Baer's.]

Michael Rosenthal first tipped us to this remarkable set of U.N. documents which arose from a conference in Rome in 1961. If you're deeply into solar or wind energy there's lots of stuff here unfindable elsewhere. Japanese solar pillows—simple elegant water heaters up on the roofs, thoroughly described in Vol. 5. Traditional Dutch drainage windmills with suggested adaptations for other early-technology applications in Vol. 7. And so on. A trove.



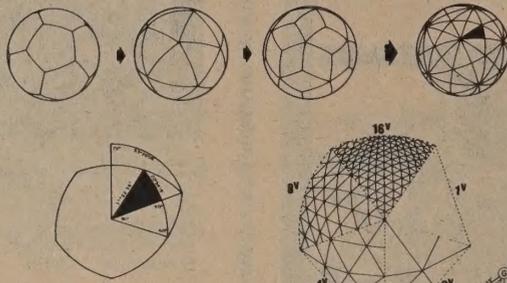
GEODESICS

It's been going on for years: "Fuller domes. Right, okay. Only what the hell are the chord factors? What are they using for connectors? How does the building go up? Where do you take in the plywood overlaps so the surface curves? Where's a diagram and photo that bear some relation to each other?"

All here, or anyway plenty here. Straight specifics to match the splendid generalities.

Domer Steve Baer adds:

A book about geodesic domes. Half a dozen pages of text and about 90 pages of illustrations. Angles and edge length ratios are given in some instances. The illustrations are beautiful. They are good for a designer's brain—they will show a final form and then also the form's childhood by pin-pointing pts. of symmetry from which patterns grow.



MEMBER	ARC	CHORD FACTOR
AB 80° 18' 00"	8 31	1137080
BC 61° 48' 00"	6 28	1188802
CD 51° 30' 00"	6 21	1084864
DE 41° 30' 00"	6 16	1084876
EF 31° 30' 00"	6 12	1084882
FG 21° 30' 00"	6 09	1084886
GH 17° 30' 00"	7 38	1328738
HI 16° 00' 00"	7 35	1328448
DI 16° 00' 00"	7 34	1290880
EJ 15° 00' 00"	7 30	1237076
FK 14° 00' 00"	8 16	1074520
GL 13° 00' 00"	8 18	1084840
HM 12° 00' 00"	5 17	10488
HN 11° 00' 00"	3 15	114

Fig. No. 7. Top: Cumulative superimposition of dodecahedron, icosahedron, and rhombic triacontahedron to achieve smallest common triangle. Mid-page: Basic spherical triangle, multiple frequency comparison. Bottom: Typical geometrical data for 16° Triaxion breakdown. Same chart is good for 2°. Triaxion eliminating unnecessary members. New chord factors are needed.

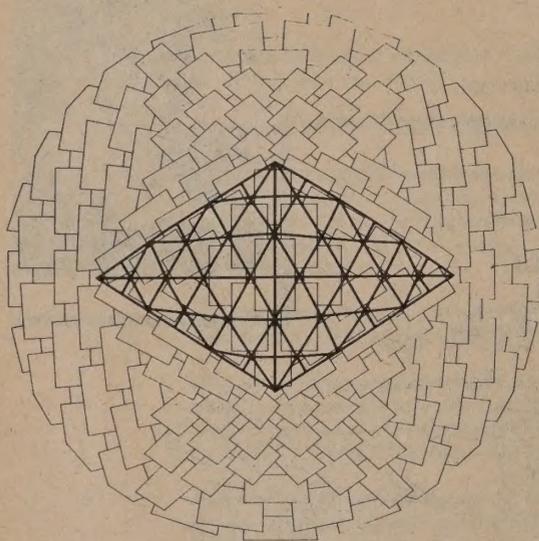
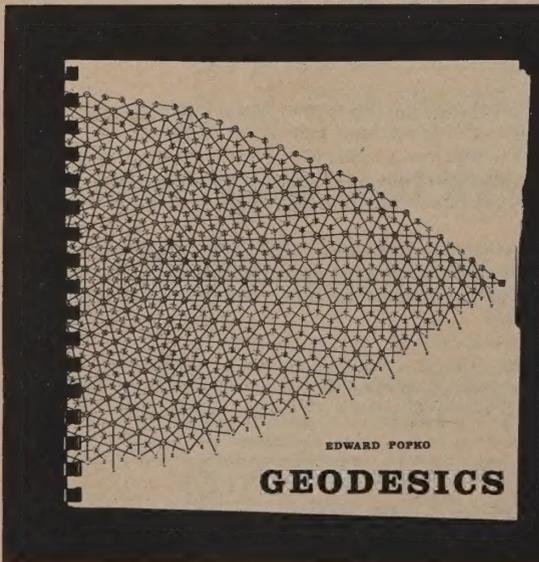
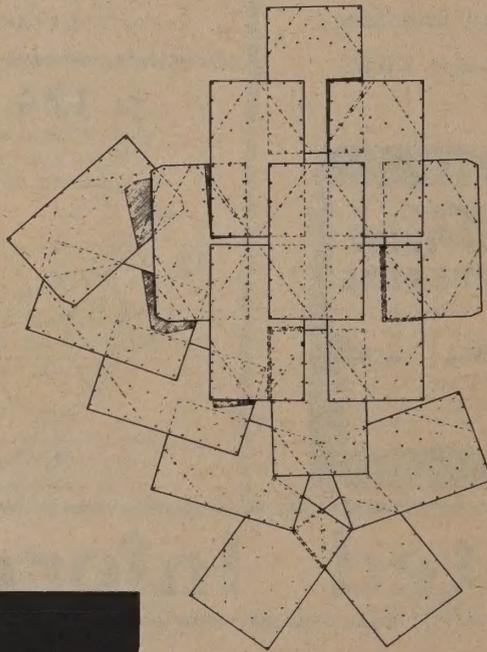


Fig. No. 4b. Geometric interpretation of sheet layover and full axis. A 16° Triaxion, edge south breakdown. Note pentagonal window remains as axis. Although oblique in form and in water proofing the emissive quantity of layover and window variance make this structure questionable. The impingement of the material use for spherical forms however is to be admitted. See Fig. 99 for similar erection. Project by Geodesics, Incorporated.



6 Geodesics
Edward Popko
1968; 124 pp.
\$4.00

from:
University of Detroit Press
4001 West McNichols Rd.
Detroit, Mich. 48221

or
WHOLE EARTH CATALOG

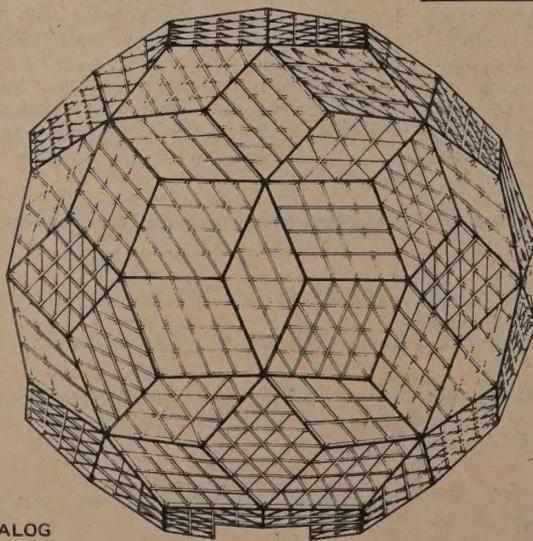


Fig. No. 10. Plan, basic hyperbolic paraboloid diamonds composed of 1" x 8", 2" x 3" and 1" x 2" members—diamonds are approximately 10' to an edge.



Proceedings of the United Nations Conference on New Sources of Energy

- Vol. 1 General Sessions — \$2.50
- Vol. 2 Geothermal I — \$5.00
- Vol. 3 Geothermal II — \$5.50
- Vol. 4 Solar Energy I — \$7.50
- Vol. 5 Solar Energy II — \$4.50
- Vol. 6 Solar Energy III — \$5.00
- Vol. 7 Wind Power — \$3.50

from: Sales Section, United Nations, New York, New York



Fig. No. 101. Assembly sequence 55' diameter strut and membrane 14' Alternate dome. Note expansion sectors and pull-chain adjustment at spire casting.

New Suggestions

Want to go to Japan for Expo 70?

Lloyd Kahn came up with the notion, why not charter a plane to the 1970 World's Fair in Osaka and fill it with CATALOG subscribers who are interested. We could make it one-way, let people find their own way back via India, Australia, Tahiti or whatever.

First query with the airlines reveals that Japan Airlines will fly 130-150 of us to Tokyo from San Francisco for about \$210 a head. While we're finding out if we can meet all the legal requirements (looks promising), why don't you let us know if you want to make the trip? We're talking about a late June departure.

Canadian Tax Land for Sale

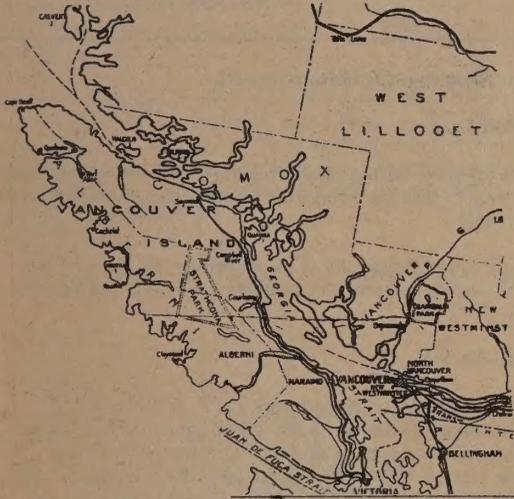
H. M. Dignam Corp., Ltd. sends out a brochure every 6-8 weeks listing parcels of tax land for sale through the company. Lists parcels in all provinces and includes a brief but accurate description of each along with its location. Prices range from \$200. to several Thousand depending on Locale, size, etc.



Tracy S. McCallum
Minneapolis, Minn.

\$1.00 brings four issues of brochure from

H. M. Dignam Corp., Ltd.
85 Bloor Street, East
Toronto 5, Ontario, Canada



Terry Link suggests

T. M. Chan & Co., P. O. Box 3881, Hong Kong—Excellent source of cheap photo equipment. Catalog available free. Sample prices (Jan. 1968) Asahi Pentax Spotmatic, f/1.4 lens \$139. Nikon F, f/1.4, \$201. You pay that plus U.S. Customs Duty (22%). The catch is, if Customs finds camera going through, they make you remove trademark by grinding it off because of U.S. distributor's rights. The point is, you don't always get caught. Airmail delivery available. Return of defective light meter (Gossen Luna-Pro, \$35) was made by a friend of mind and Chan made the exchange all right, but it took nine months.

The most practical and easily understood book on photographic printmaking I know of is Lootens' 'Enlarging.'

Things I don't know about, but hope may appear in future issues of the catalog:

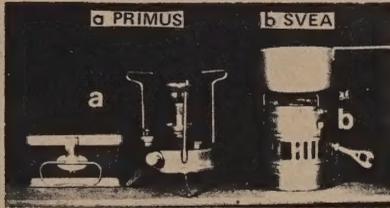
- Building trimarans.
- The physics of musical instruments (is there a good book devoted to instrument-making which includes formulas for the sound so that modifications may be made and or new instruments created?)
- Experiences in cooperative buying (neighborhood grocery co-ops, purchasing agencies, etc.)
- Polaroid MP-3 camera with instant half-tone system. Plus any other material relating to printing/publication systems. (What about the A.B. Dick 360 press? Is it as good and easy to use as one owner tells me?)

Regards,

Terry Link
San Francisco, CA

John Christian suggests

Cooking comment: A cheap, convenient and compact system for cooking indoors or out is a Primus or Svea stove with a U.S. Army 2-man mountain cook kit. The Primus or Svea stove look almost identical: a 3 3/4" diameter by 5" high perforated brass wind screen surrounding a 4 oz. tank and burner. It burns WHITE gas, one filling lasts 50 minutes. A cup (or small pot) comes with the stove. The Army Mountain cook kit has 2 large pots and a pan which acts as a cover. The stove will fit inside the cook kit. This is adequate for up to 3 adults. The cook kit can be found in Army surplus stores, or some of the mountaineering stores (probably Recreational Coop in Seattle or Ski Hut in Berkeley) and should cost less than \$5. The stove will cost around \$10 or \$11 and is available from most mountaineering stores and possibly camping equipment stores.



Buying guide: Sturdy clothes, good walking shoes, sleeping bags, rucksacks, etc., can often be bought for less than half cost by ordering from a regular sporting equipment house in Europe, even including postage and duty. Procedure: write for catalog, for example to Sporthaus, Schuster, Rosenstrasse, Munich, West Germany (or find others by asking English, German, French and Swiss consulates, trade offices, embassies). Since catalogs come with many illustrations it isn't difficult to decipher languages once you know what you're looking for. Check with U.S. Treasury Department for information on amount of customs duty on the particular item desired. Sometimes the item will come in without any duty being charged, this is generally so on small items. You can send an ordinary American check made out in dollars; no need to get special checks made out in local bread form. Tricky thing on ordering shoes you need to know your size in the European system or send footoutline and American size and hope for best. Generally, European shoes are narrower in toes and wider in heels than American shoes.

John Christian
Buffalo, N.Y.

Cary James suggests

Books. Lancelot Law Whyte, *The Next Development in Man*, Mentor paperback, 60¢ (may be more now). Written in 1948 but still relevant. Whyte wants to change the processes of thinking from static concepts to fluid developments. In order to do this he first has to redefine the whole language to replace our usual noun-name centered ideas with verb-action-process emphasis. Most of the book is a long, head-wrenching reinterpretation of Western history, seen as the working out of what Whyte calls the universal formative principle. But where we are now represents a blocked, one-sided aspect of this principle, hence the requirement of the development of process thinking and unitary man. The failure we are living with now Whyte recognized in 1948, the value of the book is its display of a vast and essentially complete metaphysical system that is in fact a philosophic program for the future.

"Form is the recognizable continuity of any process." p. 15

"Anything which facilitates the development of characteristic organic form is called proper to the organism." p. 23

"The poverty of language in process concepts compels unitary thought to use 'process' as both noun and adjective. Formation, growth, development, destruction, decay, are process concepts; god, idea, number, matter, energy, are static concepts lacking the asymmetry of the time sequence and implying permanence." p. 27

"...the one God was a jealous God. With the ideal of universality appeared intolerance." p. 76

"More comprehensive processes than those of the conscious mind control human destiny." p. 118

"The final elimination of the dualism can only come about through the realization that the need to formulate ideals, and in so doing split man asunder, is itself an expression of the very human but futile desire to escape the uncertainty of process and find spiritual security in the aim at least of a permanent harmony. Unitary man can achieve this realization, and see himself as a whole, because he is ready to accept his personal life for what it is, a transient development through changes which cannot be foreseen." p. 210-11.

Cary James
Mill Valley, Calif.

Ed Rosenfeld suggests

Main Currents in Modern Thought — a magazine published five times a year by the Foundation for Integrative Education. Their own self-description: "A cooperative journal to promote the free association of those working toward the integration of all knowledge through the study of the whole of things, Nature, Man, and Society, assuming the universe to be one, dependable, intelligible, harmonious." They have had many great articles and continue to feature some of the world's most important people talking about what is really important for living. The current issue (V. 25, No. 4) contains a 1966 letter from Bucky Fuller to C. A. Doxiadis, in which Fuller outlines his life-long concerns and priorities in 14 parts. In operation since 1940. \$4.50 a year from 12 Church Street, New Rochelle, New York 10805.

The fantastic knowledge of Harold A. Innis is apparent upon noting what Marshall McLuhan has used of his in *Gutenberg Galaxy*. Two of Innis' books are worth owning in their own right. One, *The Bias of Communication* (\$2.50, 1951, 64 & 68, University of Toronto Press, 226 pp., papercovers), with an intro. by McLuhan covers some great territory: the crystallization of cultures, the bias of communications, the problem of the proper use of past knowledge, the problem of space, technology and public opinion in the USA, etc. These reprinted papers cover lots of ground, while the footnotes that join them make almost a second book in terms of information. Innis' major work is entitled *Empire and Communication* (1950, Oxford, hardcover). It makes *Bias* look like a primer, at least upon my first inspection, anyway.

Beyond Left & Right is a superb collection of essays, edited with an introduction by Richard Kostelanetz (\$2.95, Apollo Editions, 425 Park Avenue South, New York City 10016 No. A-202, softcovers, 436 p. 1968, also in hardcover with Richard's picture on the wrappers). All under one cover are some of the great thoughts of Fuller, McLuhan, Boulding, Kahn, Theobald, Safdie, Farson, P. Goodman, Edw. Hall, Doxiadis, and so on. The point of the book is that the answers to problems from now on must be made from an extrapolitical base. Richard has picked some of the best, provided a good essay himself and arranged them all under the following categories: man & his future, technology and society, enterprise & remuneration, architecture & city planning, people & resources, education, defense & diplomacy, and redesigning society. Also, an excellent bibliography. Great book.

John Wilcock's *Other Scenes* International Newspaper always has interesting things in it. Most especially John, who knows everyone and wants to introduce each of us to all his other friends. I've gotten more tips for new mags and books from John than almost any other source. I think an ad in OS would be very fruitful for the CATALOG. Subscription \$5.00 for the rest of 1969 from Room 419, 41 Union Square West, New York City 10003. Free listings for intl. travel ad listings of 50 words or less.

Robert Theobald is a great economist and someone aware of the impact of technology on our money/gold oriented society. He makes meaningful comment on these dilemmas in a number of books, including *The Rich and the Poor* (\$0.50, Mentor MD325, 160 p. 1961 paper), *Free Men and Free Markets* \$0.95, Doubleday Anchor A447, paper, 173 p., 1963, 5. where he first proposed the guaranteed income.) and his newest book *An Alternative Future for America* (\$1.95 186 p., 1968, The Swallow Press, Inc., 1139 S. Wabash Ave., Chicago Ill. 60605, paper.) An informed view of how it is and what steps to take to deal with it.

Black Elk Speaks Being the life story of a holy man of the Oglala Sioux by John G. Neihardt (*Flaming Rainbow*) \$1.50 A Bison Book, paper, U. of Nebraska Press, Lincoln, Neb. 1961, 280 p.) is the closest book I know of to the Indian consciousness. I have often read it the way I do *Finnegans Wake*, by just flipping it open and reading out loud. Pure poetry, rich dreams and archetypal Amerindian images of the plains and life there. "They are coming to behold!"

My old lady, Dee, designs and sews clothing. She swears by *20,000 Years of Fashion* the history of costume and personal adornment by Francois Boucher (I think it's \$25.00, Harry Abrams, NY, 1966, 441 p., many illustrations, huge format, hardcovers). It is what its title and sub-title indicate. It covers everything and can help anyone with new and old ideas about how to do the same for human bodies. An invaluable source book.

George Sarton's *A History of Science* seems to be the occidental equivalent of Needham's *Science & Civilization in China* (I've read volumes I & II of the latter and found it to be excellent. I'm not trained enough to evaluate the later volumes but can highly recommend the first two.). I have not read any of them, but after looking through two of the 8 volumes it seems to me that Sarton has covered all of the material for the subject. Harvard U. Press, Vols. I & II in paper so far and more to follow (paper publ. by John Wiley.).

Edward Rosenfeld New York, N. Y.

John Ross suggests

somebody wrote you in one of the supplements and mentioned topographic maps. YES!! they are incredibly useful for people who want to know what their environment really is like. the price is amazingly low for the amount of information each one contains, and when you piece together half a dozen or so adjoining ones, you begin to get an idea of what the area is about. this is especially true around bodies of water (which is where i have spent most of my life (on the atlantic), but i suppose the same thing is true for the rest of the world. i have the new york metro area and most of long island on my office wall (it's a big wall) and all of the people who come in, when left alone for a few minutes, can be found standing about a foot from it with a sort of "how about that?" look on their faces. indexes are free from the geological survey and include lists of special maps and directories of local sources. the places that resell them—map stores, camping supply houses and like that—get a slight markup, on the order of a quarter or less, but if you're in a hurry, it's worth it. but if not (figure a month to six weeks) order from washington or denver and tell them to send them back in a mailing tube and not fold the maps. there's a quantity discount.

a post office box is a very useful, cheap tool for the gathering of information and tools. the smallest size runs a dollar and a half per month, and there's no need for anything larger. when it's full, the mailmen put the stuff aside until you pick it up. the merit of a p.o. box is that it provides you with an address. there are lots of magazines geared to special industries—electronics, printing, just about anything else you might be interested in—which circulate for free to people in the industry, and are unavailable to the general public. create a company name, along with an untraceable address, and define yourself as a director, or president or something, and they will send you the magazine. go to a business library that has them, or ask friends in the business, and tear out the subscription card from a copy. then you get access to "bingo cards" which are a means of access to specific product data. for a small amount of money you can get a letterhead printed up that will get you lots of additional information. There are other benefits that escape me at the moment, but it's very definitely a good thing.

John Ross
c/o Public Information Office
Third Coast Guard District
Governors Island, N.Y. 10004

Oscar Firschein suggests

The Systems Approach, C. West Churchman, Delta paperback, \$2.25 (Delta Books, 750 Third Ave., New York, N. Y. 10017).

One would not expect a book with this title to have relevance to the People's Park issue in Berkeley, but it does. The book describes and examines the "Systems approach" to planning in government, business, and industry, and indicates some of the characteristics of this approach that the citizen must understand to prevent his being snowed by supposedly scientific analyses in decisions that affect his life.

In the sense used by the author, Plato's *Republic* is a famous systems science book, and writers such as Hegel, Marx, Schopenhauer, Nietzsche, Spengler, and Spencer, to mention just a few, used a systems approach. Four different ideas as to what constitutes the systems approach are discussed in the form of a debate between the different schools of thought:

1—the advocates of efficiency, who claim that the best approach to a system is to identify the trouble spots, and especially the places where there is waste, e.g., unnecessarily high costs, and then proceed to remove the inefficiency.

2—the advocates of the use of science, who claim that there is an objective way to look at a system, and to build a 'model' of the system that describes how it works.

3—the humanists, whose fundamental approach to systems consists of first looking at human values: freedom, dignity, privacy. They say that the systems approach should avoid imposing plans, i.e., intervention of any kind.

4—the anti-planners, who believe that any attempt to lay out specific and 'rational' plans is either foolish or dangerous or downright evil. The correct approach to systems is to live in them, to react in terms of one's experience, and not to try to change them by means of some grandiose scheme or mathematical model.

In a concluding statement the author writes,

"There are no experts in the systems approach...the real expert is still Everyman, stupid, humorous, serious and comprehensive all at the same time. The public always knows more than any of the 'experts,' be they economists, behavioral scientists, or whoever; the problem of the systems approach is to learn what 'everybody' knows."

Countless semi-governmental and governmental bodies are today carrying out plans which affect the lives of everyone without considering Everyman. This book provides a good idea of how such bodies think, and the failings and limitations of their particular approaches. This is good background to have when fighting highway commissions who use cost benefit analyses in justifying freeway routings, or Boards of Regents and university administrators who shape the areas surrounding the university as they see fit.

John Holt suggests

Would love to review George Dennison's *THE LIVES OF CHILDREN* for the Catalogue. Never mind the \$10. What is the deadline?

(Available from Random House.)

New Schools Exchange

The New Schools Exchange Newsletter, Box 3511, Santa Barbara, Calif., 93105 is communication between 250 Free Schools throughout the United States and Canada.

It plans to list teachers, ideas, students and ideas in search of a school. It serves as a platform for diverse educational ideologies. It brings people together in their search for enlightenment and in their initiations of (choose your adjective) free, new, Summerhillian, innovative, experimental, radical schools. The New Schools Exchange wants no financial rewards, but there are the expenses of postage, materials and maintenance. We ask a dollar for subscription.

Handbook for Building Homes of Earth

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Charles Tilford
New York, N. Y.

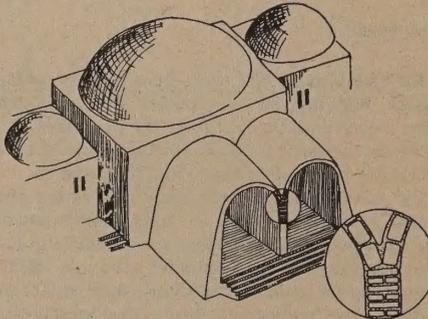


Figure 88. This style of earth dome and vault construction was used in a reconstruction program at New Gourna, Egypt.

The mortar used in laying brick or stabilizing earth block in an arch, vault or dome is usually of a quick-setting type. In many middle Eastern countries a mortar made with gypsum is common. If cement or lime mortar is used, it is necessary to have a form to support the brick until the mortar sets. This is usually too expensive and is rarely used in small house construction.

If you should use this type of roof, get methods and design from someone who has done it before.

Figure 85. These supports can be sawed timbers or the trunks of small trees, six to eight inches in diameter, spaced approximately 30 inches apart. For large buildings, such as the school shown in Figure 86, large trunks, ten to twelve inches in diameter, can be used. A nice appearance is produced by alternating the large and small ends of the vigas. Also, putting the small ends all in the same direction would cause that end

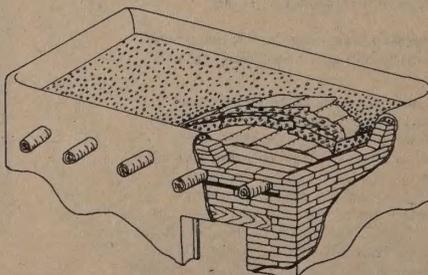


Figure 85. The cutaway section of this bunker fill roof shows the layered structure of the roof. From the top down, the components are gravel and asphalt, building paper, earth fill, building paper, wood sheathing and supporting beams (vigas).

Hog Farm Speaker

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Buncie Shadden Di Gesu suggests

—On Herbs etc.

Back to Eden by Jethro Kloss—healing herbs, home remedies, diet & health—a rather folksy farm approach. (Also sug. by Don Rosset)

Natures Healing Grasses by H. E. Kirschner, M.D.—again an unsophisticated-personal experience type viewpoint-but very helpful.

—On Needlework

DMC Encyclopedia of Needlework by T. de Dillmont—a small inexpensive volume of 800 pages (small type & pages) with sections on sewing, mending, embroidery, knitting, tapestry, laces & macramé, etc. (which gives a broader perspective on macramé than Virginia Harvey's book). It is very detailed on 'how to' instructions & not difficult to follow. (\$5.00, Joan Toggitt, Ltd., 52 Vanderbilt Ave., New York, N. Y. 10017 or Craft & Hobby)

—On Weaving & Equipment

More primitive approaches might be of interest to Whole Earth readers.

Byways In Handweaving by Mary M. Atwater—an illustrated book on non-loom & primitive type loom techniques. (\$7.95; 1954, 67)

Studies in Primitive Looms by (something) Roth—valuable chiefly for well-done detailed illustrations of various simple looms that could be easily constructed with little expense from his drawings. These can be obtained from Craft & Hobby Book Service—also books on handspinning & dying, especially Hopi & Navajo dyes.

—On Childbirth, etc.

Thank You Dr. LaMaze by M. Karmel (\$4.95 Lippincott)

Awake & Aware by I. Chabon, M.D. (\$4.95 Dell)

Nursing Your Baby by Karen Pryor (\$4.95 Harper)

Jude Harris suggests

The Book of Country Crafts by Randall Wardell Johnston. "On Working with Wood, Clay, Metals, Stone, & Color, with Many Recipes & Secrets of the Crafts." Published A. S. Barnes & Co., South Brunswick, N. J.

Herbivore's Guide

I would like to turn people on to herbs. You can grow herbs in the corner of your vegetable garden, in a patio box, in a window, in a flowerpot. You can be an agriculturalist with only a few square feet of ground and prepare yourself for that land you ultimately hope to gain part or all your livelihood from. You can use your herbs for flavoring cooking, for salads, for making things smell nice, for dying cloth, for curing yourself of all sorts of illnesses, for making magic and casting spells, for alchemy. And herbs are beautiful, simple plants, most of which grow and flourish even in the poorest soil. You can even grow your own Ching yarrow stalks.

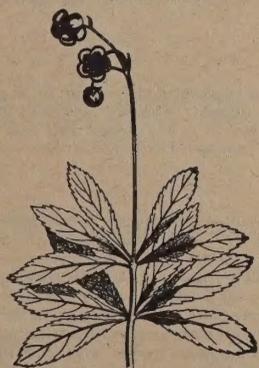
I haven't investigated many herb books as yet; maybe some of the other readers can recommend some good ones; Anyway, better to start with the herbs and get to the books later. One interesting one I've seen is NATURE'S MEDICINES—The Folklore, Romance, and Value of Herbal Remedies really lays down a lot of lore. Another good one is HANDBOOK ON HERBS published by the Brooklyn Botanical Gardens, Brooklyn, N. Y., which is enough to get you hooked on herbs all by itself. The Brooklyn Botanical Garden, by the way, publishes a wonderful bunch of books on all phases of gardening, all of which sell for either \$1.00 or \$1.50 (the herb one is \$1.00) Free list available from them.

As an example of herb lore, someone told me that when he gets a bad case of poison oak, he uses a leaf of comfrey to scratch with, rubbing it freely over the itchy spot, and wipes out the poison oak in a few days. However, he says, if you use a comfrey poultice on an infection or wound, don't bind the leaf directly to the skin, as it's so effective in promoting the growth of epithelial cells that it may actually grow to the skin. The Nature's Medicines book has a lot more rap on comfrey.

A problem with growing herbs is that there are seldom more than a few of the most common types in the local nursery. So I talked to someone who is really into herbs, spices, gardening, essential oils, gourds, and all that useful vegetable stuff, and asked her where to get herbs, etc. She sent me a list of addresses, I sent for their catalogs, and the following is all about that.

Nature's Herb Co., 281 Ellis St., San Francisco, Calif. They sell dried herbs and spices by the pound, ingredients for pot-pourris and sachets, prepared herbal remedies, and essential oils. Also various herbal tea mixtures for both enjoyment and medicine.

Herb Products Co., 11012 Magnolia Blvd., North Hollywood, Calif. 91601. Much the same as the above, with the addition of some far-out cosmetics. They are very much into ginseng, and can tell you something about that. Their prices tend to be a little higher than Nature's Herb Co., but each has things that the other doesn't.



Indiana Botanic Gardens, Inc., Hammond, Indiana 46325. They will send you a very far-out catalog and an herbalists almanac, which will tell you the best days to plant, what the weather will be like for all of 1969, and other useful tidbits. They sell teas and medicines, herbs and spices, seeds, beans, nuts, gums, resins, oils, vitamins, cosmetics, perfumes, formulas to cure liquor addiction, tobacco habit, and tobacco chewing, and tell you what grateful users write about rectal ointment no. 103.

Tradewinds Candle Shop, 1224A Fillmore Street, San Francisco, Calif. I throw this in just for the hell of it. They sell candles, but their scene is magic. I was last there several years ago, and it appeared to be an old established business, run by an elderly white-haired man who looked like a Suth'n Cuhn'l, and his wife, who looked like a Haitian voodoo lady. They sell the usual oils, powders, etc., but I think they may also handle other things they don't list in their catalog. They will also give intelligent advice on how to change your luck, make money, make your love love you, etc. They make no outrageous claims, but will answer questions. I tried them once, and their advice worked, but I don't think I'd do it again. Handle at your own risk.

None of the above deal in things for gardening.

Meadowbrook Herb Garden, Wyoming, Rhode Island 02898. Their catalog is a beautiful piece of printing and calligraphy. They don't ship live plants, but will deliver if you live within forty miles. They sell herb teas and tea herbs, spices, seeds, toiletries, books, supplies, and miscellany. They seem to be into Anthroposophy and something called Bio-Dynamics.

Carl Odom, Pinola, Miss. 39149. He will send you a very down-home two-sheet catalog on newsprint, telling you all the groovy things you can do with gourds. I won't say anything about it and ruin it for you. He also sells vegetable and flower seeds.

Nichols Garden Nursery, 1190 North Pacific Hwy., Albany, Oregon 97321. They will send you an incredible 44-page catalog that will require every ounce of your willpower to keep you from making a hundred dollar order on the spot. Seeds for vegetables and herbs, growing plants, dried herbs and spices, mushroom spores, wildflower seeds, house plants, gourd seeds, books, supplies, brewing and winemaking stuff, and all sorts of other oddments. They specialize in the unusual, like very large, very tasty, or very different vegetables. Their catalog is mimeographed because, they say, "modern high speed presses could probably do the job better, but we believe that people are more important than machines, and for that reason will continue to resist automation." I bought some live plants from them, they arrived in good condition and are now growing well.

Woodland Acres Nursery, Crivitz, Wisconsin 54114. They specialize in wildflowers and ferns, many of which have herbal uses, and sell mostly live plants.

Greene Herb Garden, Greene, Rhode Island. Getting their catalog is like hearing from your nice aunt that lives in the country. Full of news about their family, spring in New England, and gentle conversation about herbs. They sell only herb seeds and bulbs.

Vita Green Farms, P.O. Box 878, Vista, Calif. 92083. They sell vegetable and herb seeds, vegetables, fruits, and preserves. If you want organic produce and are not near a good health food store, their vegetables might be worth investigating. Expensive, but I'm sure they're excellent. All vegetables are organically grown, seeds are "un-treated, natural, old-fashioned, un-hybridized, un-crossed." Their tone is a little stern, but anyone who raises organic produce for a living is bound to be a fanatic and a crusader. I sent for some of their seeds, and they came virtually before I put the letter in the mailbox. They are also pure water maniacs, and sell various types of home filtering units.

Walnut Acres, Penns Creek, Pa. 17862. They sell nothing for gardening, but have the most complete selection of organic foods and related products I've ever seen, including every conceivable organic grain. Prices are high, but they have all sorts of stuff I've never seen before. They also seem like very beautiful people who love and are concerned about the world around them.

That's all for now. I'll keep in touch. Keep up the good work.

Love,

Roland

Roger Knights suggests

The Crowd by Gustav le Bon. Insightful, readable, influenced Freud. The Money Game by 'Adam Smith.' Is capitalism on the verge of becoming a Parker brothers game? Will the brokers throw money back at Abbie next time? Is there a right-wing alternative to capitalism? Read and wonder. It would certainly be an unexpected way out. Games People Play by Eric Berne. A different sort of game theory. Fascinating, multi-faceted. A Freudian I Ching: bad scene-name it-dissolve it. Also fun to describe newly discovered games (though that can become a game too). Life Against Death and Love's Body by N. O. Brown. Social and Cultural Dynamics by Pitirim Sorokin. Verry interesting. Nature, Man and Woman by Alan Watts.

info on the positive-ion machine, which enables people in enclosed areas which are deprived of positive ions (mountaintops and post-lightning-strike areas are rich in them) to work and feel much better. Developed by the Germans in WW2 for their pilots and used by our Air Force since. Recently declassified—Boeing has ordered thousands for its plants. Cost is about \$400. I think I saw a mention of it in Business Week nearly 2 years ago.

How to Lie With Statistics by Darrell Huff. Beautifully written, incredibly funny, indispensable to an understanding of manipulation of the truth. A classic.

Uniclub, 255 W. 42, NYC 10036, gives better discounts \$3.09 vs. King Karol's \$3.35 and sells more things. Lifetime membership is \$5. (also has 'specials,' etc.) (They claim their service is the best.)

Men in Groups by Lionel Tiger. From Robert Ardrey's review: "And as an earthquake cannot be fenced, so the shock waves proceeding from Tiger's idea cannot be contained by the covers of his book. Still they proceed, in the reader's mind, toppling farther steeples, smashing farther crockery."

Very few places stock 8 quart pressure cookers, and practically no place stocks 16 or 21 quart pressure cooker/canners, except Sears. It took me a lot of looking to find this out, and it might be worth mentioning to save other people trouble.

GMAC needs people to drive their repossessed cars all over the country. Once a person qualifies with them, he can henceforth drive free anywhere, practically. (I think.)

Why not put a little black dot beside new (first-time) entries in the catalogue, both in the text and in the index?

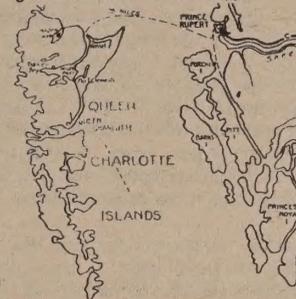
Yours,

Roger Knights
New York, N. Y.

Kieth Gilbert suggests

Some books which would be useful are: Canoes and Canoeing by Percy Blandford, Lutterworth Press, 1961. It is all about the European Kiyaks and how to make and use them. Other books by this author on small inexpensive boats and equipment are also useful. The Smithsonian institute also published a book on Eskimoe kiyaks and Umiaks as well as how birchbark canoes can be made. Goat Husbandry by Mackenzie, Faber & Faber, N. Y. & London. A real good book but expensive, \$11.

I suggest that you do a little research for some of your readers and give the more hardy and adventurous some of the details concerning Alpine County, Calif. Population 300. There are about 100 voters and Markleyville, population 50 is the county seat. The sheriff is a woman. There is a lot of government open range land and county owned land is constantly being sold. Access in winter is through Nevada only. Another worthwhile location is the Queen Charlotte Islands of B. C. Canada. There are only 3,000 people on 4,000 square miles of land. There is work to be had with the canneries, fishing boats and lumber companies. Land is cheap where available and some spectacular buys are available. You could almost start a new country there. Look into Naden harbor and the site of the old Naden Harbor Whaling Station. Hunting is great, the limit on deer is one a day per person. There are no major or minor predators. Only nucance animals are black bears and racoons. There are also wild cattle, elk herds and other native animals. It rains a lot but only a little bit comes down at a time. Some hot springs exist as well as mineral deposits, etc. Have a look into the area and I am sure you will be impressed with its future potential. I hasten to suggest that you advise your readers that the Haida indians who inhabit the island come from a capitalistic society and also that negros would probably not be made welcome. I was in Canada as a fugitive and had an opportunity to really study this area and do research on it at the geodetic survey office. It is an area where three months of work by one man will feed him and his whole family for the other nine if he is taking his living from nature and the land.



Kelty Pack, on Victory Blvd. in Glendale, Calif., is the maker of the finest light weight pack frame going. Many paramilitary groups in that part of the state have already proved their worth. They cost about \$40 each complete.

A book now out of print which you might look into is, Get Ye Up Into The High Mountains, by Dallas Roquemore, Pilgrim Torch, P. O. Box 257, Englewood, Colorado. Shows a different touch to the same thing you are doing.

A few comments on some of the merchandise which you list. I have been locked up for four years so I hope I do not get out of line. Get some chemist at a local level to develop a poor man's soil test kit. Indicate when books are paperback or hard cover. Tiny Tiger type generators are available for about \$45.

Push horse hide for leather clothing. It is better than buckskin. I was a motion picture costumer for five years and I know whereof I speak. More information on homemade music instruments would also be welcome. Such things as dulcimers, etc., and sources of good music instruments at reasonable prices as well as kits might be a help. Forget Lafayette Radio Co. For citizen band radios I would highly recommend the Cadrey line. When I had my gun store going we used to sell quite a number of their 5 and 2 watt radios to paramilitary groups who tended to buy only equipment which would hold up so you would have little trouble with it. The Cadrey walkie talkie can be set up with nickel cadmium batteries, it has external jacks for outside antennas, mike, and earphones and can be used with a dipole antenna with good effect up to about 20 miles. GE and others now have similar equipment. Even Sears and Roebuck.

Emergency Combat Field Surgery Manual for U.N. Forces is now available from The Queens Printers, Ottawa, Ontario, \$4.

Long time storage of grains can be accomplished by placing grain in 5 gal. tins with a piece of blotter paper on top, pour a tablespoon full of chloroform on paper and close top, seal with solder and or pararend. turn cans every three months. good for over five years.

In return for your kindness I would like to make this offer. I have an unusual background and have been doing some of the things that you have been writing about for over 16 years so if you have any trouble locating some things just write to me and on the envelope put a notation, 'Business,' and I will try to help. Often I know people who can direct you right to what you are looking for. Try me and see.

You have listed Chippawa boots with Vibram soles. Also The Eddie Bauer Co., 417 East Pine, Seattle, Washington, 98122. Another good item is Old Hickory butcher knives from hardware stores. Better than most expensive hunting knives.

I would be curious to know why more groups have not incorporated as churches. It would stop much of the harassment and other inequities so long as every one kept their hands straight.

Have some of your people looked into the government MARS programme, it could be worth it to a large group which has formed its own government.

Burlap sacking has been successfully used as sideing on cheap buildings after being dipped into concrete and nailed up while wet as you would shingles. I understand that it is good for up to 20 years.

Another one, people who use indian moccasins for footwear can increase the sole life by covering the footprint with rubber glue and putting on a couple of layers of ground rubber from a tire retreading outfit. If repeated as it wears through to the leather it is possible to wear out the tops before the bottoms have been worn through.

For further information on good teepees contact Fairchild Woodcraft in L.A. and Western Trading Post on Zuni St. in Denver Colorado.

I remain cordially,
Kieth D. Gilbert P. O. Box B-4754
Tamal, California

Other People's Mail

The Suburban Guerilla Strikes Again

If I ever write a book called Little Subversions For Suburban Guerillas, the first chapter will be about back-yard compost piles.

We have a fine one cooking in a shallow hole behind the house. All our vegetable waste goes in it. Leaves, grass clippings, pine needles, wood ashes, kitchen garbage. We've had it about three months now. Every time I dump another pail of kitchen waste on the pile I have a wonderful sense of triumph over all the forces tending to make life in the suburbs barren. Helping the organic cycle to complete itself in such an unlikely setting is my favorite theme these days. The soil of our little homestead is being renewed by the products of the plants, animals and humans that live on it. Our pile is no bigger around or deeper than a tea table at this point. Yet there must be 200 pounds of stuff that will soon be pure humus. The pile is full of life, redeemed from civilized death at the hands of the garbage collectors. Garbage collectors can bleed a suburban homeplace dry, in time. I think of our pile as a kind of tourniquet, stopping the loss of life-blood from our teeny patch of ground.

Suburbanites interested in having compost piles could learn a lot by reading about them in the Rodale books on organic gardening. It's quite simple. I began with a hole about eight inches deep and four feet square. Every time I put some garbage or grass clippings in the hole I'd toss some dirt on top. When all the dirt was used, I simply shoveled out the hole again, dirt, grass, garbage and all, and started the process over. At first the proportion was about 1/3 organic matter and 2/3's dirt. But gradually this has changed, until now it's hard to tell dirt from the organic stuff. Gradually it's becoming compost. When it's finished I'll use it or store it in bags, and start another pile in the original hole.

Some people have asked me about odor, and flies. No problem. (But you do have to be diligent. A suburban guerilla must always be careful, operating so far behind enemy lines). Every time I put anything on the pile that might attract flies, or smell bad, I sprinkle over it a handful of composted steer manure I bought at the store (50 pounds for \$1.19, good stuff) which starts the process of decomposition before the goodies in the garbage begin to ferment. A shovel full of dirt on top of that safely seals it in. Our neighborhood is alive with dogs and cats, but in three months not one has been interested in our compost pile.

That is only one way, of course. There are dozens of other methods, including using garbage cans and plastic bags, if you don't want to dig a hole.

We're thinking about getting a shredder, to grind up the organic matter and make finer compost faster. I can imagine the day when shredders will be as essential yard equipment for suburbanites as lawn mowers, especially here in the San Francisco area where, starting next January 1, backyard burning will be illegal, because of the smog. I noticed the spring Catalog mentioned the Sears' shredder, for \$135. I'd like to see the Catalog check into shredders, and devote more space to them in the future. If any readers have first-hand information about shredders I hope they write to the Catalog.

The spring issue was great! May the Lord shower rich blessings upon the whole earth, its trees and flowers, rivers, hills and catalog.

Gurney Norman
180 Stanford Ave.
Menlo Park, California

From (lost his name)

Request:

If you find that you have dead space when you do your layouts, how about filling in with the phrase

"Shoes For Industry"

No explanation. It's just a catchy phrase I worked up a year or so ago. I hitched from Montreal to Vancouver with a buddy one time and we wrote it all over signboards, guardrails, bathroom walls, etc. along the trans-Canadian highway. We kept spreading the word, and sure enough, after about six months it started cropping up in places we'd never been near. Two peacekeepers brought it back from India. A kid from London (a friend of a friend) whose father was a BOAC pilot flew to Karachi Pakistan (free passage) and scrawled the message in big red letters on the front of the Chinese and American Embassys...and onandonandon. Like in court during embezzlement case in Massachusetts.

It's really beautiful. It would really be beautiful if someone could get 10,000 little pieces of paper with SFI on them and throw them off the roof of the Wells Fargo building...

When I go out into the world to spread the word, I always write it like this:



Venison getting

I read that book by Francis E. Sell that DEER HUNTER'S GUIDE & it's pretty good if you're one of those sporty guys he says he killed a thousand deer 1000

that's a lot of meat for a man & his family & his friends to eat at Libre we killed 8 deer last year & we fed a lot of friends & we thought we had plenty of meat at that rate it'd take us well over 100 years to kill 1000 deer guess we just aint sporty enuf

It takes Francis Sell about 200 pages to tell you the same things that Herter's tell you in that free 20 page pamphlet you get with knives & deer calls except the Herter's pictures are better

I don't know anything about sporty hunting
I'm a good poacher
I've thought a lot about it & decided that if there's going to be meat on our table I'm going to put it there
I hunt with a .22 Winchester magnum with a 4x scope
I have a blind overlooking a big block of salt in a creek bottom the deer come there every morning & evening
I watch them
I call them with a Herter's Deer Call
I ask them if any among them is ready to die
I tell them that we will use the energy we get from eating their flesh in a way that would please them
I don't forget those words
almost always it is a doe without a fawn or a lone buck that tells me he will join us
I shoot them in the chest from no further than 50 yards
they die almost instantly
I feel their spirit enters me
everytime
it feels good
that's all I know about killing deer.

Joy — Love — All Blessings
Peter Rabbit
Libre, Colo.

pamphlet:
Herter's, Inc.
R.R. 1
Waseca, Minn.

From Margot Patterson Doss to CATALOG and Back.

The new catalog looks even more useful than the last one. As I was reading it in bed this morning it occurred to me that I have written a book that fits 3 and possibly 4 of your criteria for the function of the catalog. It is San Francisco at Your Feet, Grove Press, \$1.95. Useful for low cost exploration of S.F. (especially to newcomers to the area). You can do most of the walks in this book free and we also give walking time and available public transportation. The Chamber of Commerce doesn't like me very much because the book doesn't tout hotels, motels, restaurants, etc. and gives you more honest info than Grey Line or any of the touristy businesses.

Since the book was published in '64, Sutro Baths has come down and a few other landmarks but mostly the City is the same. For that matter, a reader can use the book as a measure for recent changes. Certainly walking isn't going to change.

(I'm also enclosing a copy of The Museums of S.F. which some librarian prepared for the Conv. & Visitors Bureau. Free. And one of the best things that usually mercenary outfit has put out.)

If you like the book, Don Allen, 1815 Jones, could probably arrange for the Truck Store to get it cheaply. I'd like to see the store if it comes to S.F. or to Bolinas this summer. Almost any weekday afternoon in July would be a good time for the truck to call on us in the City. We'll be in Bolinas in August and anytime would be good there. Is it big enough to 'walk' around?

Cordially

Margot Patterson Doss
(Mrs. John W. Doss)
San Francisco, CA

Mrs. Doss,

I've been a fan of your walks in the Chron for some time. I particularly remember a sojourn of North Beach with Ginsberg when Allen was still anathema to most. I'd like to ponder your book a while in regard to the CATALOG, for these two reasons—1) it's local (we don't carry the excellent UC Bay Area series on weather, mushrooms etc etc for this reason), 2) the source is a friend (at least retaining subscriber); my SOP here is to wait for independent suggestions before promoting friends' work.

The travelling truck store is currently out of action because the entrepreneur was inspired by Baba Ram Dass to seek a more direct route to enlightenment than wheeling and dealing. If you know any takers for his job, it's open. Meanwhile, there might be a walk for you in this odd commercial district of downtown Menlo Park. Within 3-4 blocks is Whole Earth, Free U, Kepler's, East-West books, nifty train station, SRI, Menlo Recreation Center. It's the closest that Stanford comes to a Telegraph Avenue, and it's early yet, blissfully unselfconscious.

If you're interested in Midpeninsula country walks, the Head of Portola Institute, Dick Raymond, is an old Green Foothiller and has considerable lore.

Many thanks for the book, and again for subscription.

Stewart Brand

From Stephanie Mills

Have you ever thought about the possibilities for freeway theatre? After all, 1000 people trapped on a bridge approach at five are a community. Get some brave types to walk between the lines of cars & talk to the drivers "Hi, nice day, isn't it? I'll bet you're getting a headache. How many children do you have? Did you ever think that if all of us only had one or two that you wouldn't be trapped here?"

Enjoy New Mexico to the hilt. That kind of space is holy.

Stef

From Mu

Greetings From a Far-Off Mind—

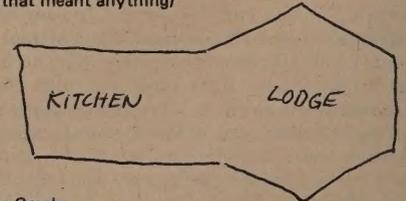
My travels now take me closer to God within but as the drama unfolds I learn othings also—things that concern the Catalog (?) —you judge—I'll report—a thread of my Karmic past—I deeply love you all

Mendecino:

Small, unrefined arts/crafts town—soon to be a Carmel type (?) I'm not sure—probably The one bookstore (new & used) is going out of business. I only passed thru didn't ask around—the area might have used the Truck Store

SunnyValley:

Visited The Family of The Mystic Arts—approximately 30 people—living a very primitive pioneer/indian existence—living in tepees (Goodwin-Cole), lean-tos, domes, huts during warm months all activity centered around lodge built of logs—hand notched, mud filling etc.—measures 30' x 54'—not counting kitchen—also have 2 outhouses, a sauna, larder & 2 tool sheds—all building done with chain saws & hand tools—all knowledge aquired from catalog-type books taken from library—no money —doing well though too much on external trip for my desires (as if that meant anything)



Quines Creek:

A community dedicated to the inner journey—Christ centered 3 yrs old—full of love—farm buildings, 2 houses—30 people—their library has a few Catalog books (Herbalist, Organic Gardening but mostly books that are supportive to consciousness expansion—most books come from the rational mind—the rational mind can't 'afford' to get high—returning to OM can't happen with books. The Catalog is well received & used with the library. The Supplements are more enthusiastically talked about—the 'drop-outs' say—"If you're going to drop out—drop out—if you're going to have a community—do it—don't talk about it—develop your own architecture."

Supplements=communication=they dig it
Catalog=money=they don't have any

People come by Sunny Valley and ask how to start communities—they answer "make sure you have land—everything else you have to learn yourself, depending on who you are, where you are, what you want, etc"

That is all I can report

The family is fine—the battle inside rages

God Bless

Mu

From Lloyd Kahn

Still working on dome instruction booklet. Think you could run note in supplement asking for any information on dome building? I'm gathering information from everyone I know on their experiences in dome bldg., materials, connectors, waterproof membranes, geometries, etc. Already lots of data gathered/write just Lloyd Kahn Big Sur CA 93920. Publish in fall.

Incredible things starting to happen, as if general consciousness now picking up on idea of spherical bldgs. Emergence by emergency? Baldwin, Wingate brothers coming down this summer, we'll take our time and get several beautiful and functioning domes ready to go and by fall offer them to mainstream. As we build, we'll continually experiment with new materials, and it looks like a full scale business is the only way to trap enough of that material plane energy to work out something really fine. As soon as I get back from Arizona will be working on monolithic translucent fiberglass shell with sliding shade screens.

Wood has served us well but now trees are needed for photosynthesis. Learned about polyurethane foam from Bill WOOD. There are 67,000 nails in the average house. Wood domes are like playing the piano with your feet. Nature will give us new materials as the balance is now threatened—recognize them when they appear. Rather live in a foam dome in a redwood grove, or a redwood home in a wasteland? I'm committed.

Love to all you folks.

Lloyd

I no have anybody help me out.

I was a poor man.

Had to do a little at a time.

Nobody helped me.

I think if I hire a man he don't know what to do.

A million times I don't know what to do myself.

I never had a single helper.

Some of the people say what was he doing...some people think I was crazy and some people said I was going to do something.

I wanted to do something in the United States because I was raised here you understand?

I wanted to do something for the United States because there are nice people in this country.

Simon Rodia

Live Forever, Sick to Death

Dear Friends,

Please warn Chuck Kesey that BHT has been made illegal in Britain. I read this, seemingly as a warning to American consumers, in a book Food Facts & Fallacies, by Freidrichs & _____ or _____ & Freidrichs. It was just a footnote in there, but maybe Ck. could check it out before he eats further.

It wouldn't surprise me if we were all lethally allergic to the fruits of the tree of life.

Jude Harris

From Wes Wilson

Right now I'm getting into a glass sandblasting thing. I'm putting my paintings right into the glass plate and then lighting them from the edges. So far I'm still setting up the operation, but should have some pieces ready in another month.

Did you know that you can obtain yellow pages from any city (in U.S., at least), if you have a telephone, merely by requesting same from the telephone company? I have often thought about getting a similar listing of manufacturers from Europe, but have never done so, not knowing where to go. Perhaps there is a European Chamber of Commerce?

Wes Wilson
Lagunitas, CA

From Bob Ploss

Transplanted our strawberries today & started work on the power wheel for the river. Looks like a spool drum from the telephone co. will work well.

Bob Ploss
Slogan Park
B.C. Canada

From Gregory Yob to Anybody

Sirs:

I suggest the establishment of a cyrogenic DNA-tissue storage bank. The purpose of a DNA bank is to store tissue samples of all species and varieties of life for the future.

Consider the California Brown Pelican. DDT causes them to lay eggs with shells too weak to allow incubation. No more pelicans are being hatched, 2005 excepted. Since it is presently impossible to eradicate the DDT, the pelicans face almost certain extinction. In the time needed for world-wide control of pesticides, let alone other pollutants, many other species may become extinct. Some species may be important to Man's part of the earth's ecology.

Following the lead of those who freeze human bodies for possible revivification, I suggest freezing specimens of species subject to extinction. I also suggest that other species be frozen to preserve variant strains.

I believe it will be important to re-establish species destroyed in the next 20-50 years. At the least, samples will be needed to allow design of new organisms.

The cost of this project - \$100,000 - \$1,000,000 per year - is modest compared with our survival. Please pass this on to genuinely interested people.

Gregory Yob
PO Box 49, Cotati, California 94928

P.S.

I am paying the printing and mailing costs myself. I deeply need contributions, and more important, contacts with those who can help me start this project.

To San Francisco Good Times

from paul prensky & joyce gardner

New Mexico is NOT a Mecca on the Mesa—it's the Ghetto of Mecca. Too many half-truths are being told about the Southwest, creating an illusion which is a dangerous oversimplification of what's really going on. People in the cities ought to know the other side of the story—about how hippies are being persecuted out here, about how the Indian and Chicano people feel about this huge influx of freaks, about the lands and the traditions, which are a part of this place, and which our people—in their well-meaning ignorance—too often desecrate.

Since spring began, in March, longhairs have been arriving in Taos in numbers which constitute a deluge, and right now it isn't working out. Things between the longhairs and the resident population are extremely uptight and people are getting hurt. Freaks are being shot, stabbed, beaten, threatened; hostility and violence are going both ways, and an atmosphere of vendetta is developing.

Part of this is due to insensitivity and lack of awareness on the part of longhairs. The Chicano culture here is in many ways quite closed and very repressed, and incidents of public nudity and bawling have upset some people, not to mention more extreme cultural transgressions such as freaks, allegedly, breaking into two *kivas* (sacred places) at the Taos Indian Pueblo, reportedly setting one on fire.

Taos (to take one of the most uptight places out here) is possessed by a small and powerful conservative clique which has maintained a classic colonial situation for many years—an affluent and organized Minutemen group, as well as several independent vigilante committees pledged to rid Taos of the "hippies."

Any original hostilities or tensions towards the longhairs have been carefully cultivated and exaggerated by the Taos establishment. For example, the annual Fiesta in Taos, which is an important source of income for Indian and Chicano people in the area, as well as for the big businessmen—has been called off this year on the pretext there would be too many hippies here and that this would constitute a "health menace." Meanwhile, in Truchas—some 40 miles southeast of Taos, the principal of the high school required students to make anti-hippie posters, and teachers exhorted children to throw rocks at hippies.

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People in Truchas, by the way, were angry at the hippies for at least one very good reason. There's a stream in Truchas, which for some people constitutes the only source of water. This is their drinking water. Hippies came to Truchas and started washing their clothes and taking baths in the drinking water. People got uptight. They told the longhairs to cool it. The longhairs were reasonable. But next week another carload of hippies came and the same thing happened all over again.

Another example: a poor Chicano woman, with 10 children to feed, runs a diner. Some hippies (some of the first) came and asked her for free food. She felt sorry for them. She's got ten kids to feed, but she gives them coffee and beans. That's groovy. Same story repeats itself a few times and this woman isn't gonna be so friendly. This is not a land of milk and honey. This is not a Mecca. This is a poor land, with poor people, and most of them haven't enough resources to care for their own families, much less being able to take care of a bunch of longhairs who (they know) mostly come from much richer places and much richer families, and who really ought to be able to take care of themselves.

Unfortunately, our people have made the same mistakes here that we made on the Lower East Side and in the Haight. We don't bother to get to know our neighbors, to find out the local situation, to give them a chance to get to know us as people—instead of us as the media makes us out to be. No, we come in as strangers. We come to learn for the first time to live on the land. We come cause it got uptight somewhere else, we come bored or escaping from big cities. We come cause the rents are cheap. We have our own needs and desires, and we remain as strangers. People don't know what we're all about, and they do get exposed to the mass media, and unless we can sit down and talk with them, work with them, bake good bread for them, then they're not going to understand where we're at, and that can become dangerous.

Out here, jobs are difficult, if not impossible, to find. Unless you're a teacher or a doctor. This goes for longhairs, as well as Chicanos and Indians. Hardly anybody will hire any of us. And what few jobs there are puts us in competition with the poor local people—which is a drag.

Out here, land is difficult to farm. Basically, this is desert. Sand. There's almost no topsoil. Other places, you put your seed in the ground, weed a little, and hope for the best.

In New Mexico you've got to water your garden every single day or else your plants are gonna die. It's hard work. And winters are pretty cold. And it's not that easy to find wood to burn.

NO, there are NOT large numbers of communities in the north which will welcome you with open arms. The fact that there are a few communes in New Mexico has created a myth, which is mostly illusion. There have been actually three or four well-known fairly large communes in the area. The Domes, at Placitas, no longer exists. Residents were unable to pay a debt of three months back rent, and the place was sold to a private party. The Lower Farm, also in Placitas, is already overcrowded and may soon be closed down. New Buffalo, near Taos, is a relatively stable, well-established work community, and has neither the resources nor the space to accommodate many visitors, no matter how well intentioned.

Further north is Lama Foundation, a religious and work community. They only accept visitors on Sundays (this is a rigid rule), and anyone wishing to remain longer must apply for a week's invitation. And then there are maybe a few dozen smaller "families" around the Taos and Santa Fe areas. They try to be friendly, but once again, food and shelter are very limited. Existing communes have a much better chance of surviving without a constant stream of visitors.

If you plan to come here, spend a few months first *really* finding out what's going on here. This isn't bourgeois America, this is one of America's colonies: repressed, intimidated. Learn the history of the people and their struggles. Find out how people feel about the land and how you could live *your* vision here without defiling *theirs*. Don't come if you haven't got what it takes to move slowly and self-sufficiently enough to get to know the people whose home these mountains are. Our people, too often, are in such a hurry to DO a thing that they will blunder through and make all kinds of mistakes before they finally get it all together. Meanwhile, the land suffers because of their mistakes. The local people have to pay the price of these mistakes. This creates hostility towards all of us.

Think about the 120 year old struggle by Chicanos and the even older struggle by Indians to get back millions of acres stolen by Anglo ranchers and their Anglo law buddies. Think about what it means for a new influx of Anglos—no matter how different their purpose from those others—to come in and buy up

land that the local people feel to be theirs and cannot afford to hold themselves. Think about the fact that a real estate agent in Taos reports having sold almost \$500,000 worth of land to longhairs. If you're even considering buying land out here, go slow. Find out the history of the land you want to live on. Find out how the local people feel about your being there. Don't just move in, like so many Anglos before you, and flash your money around. If you can't be brothers with your neighbors, then go someplace else.

Before you come out here, read what has been done to the people here by the white man. Don't just put on a long skirt and beads and think you understand the Indians: too many rich tourist ladies do that. Learn Spanish; learn about everyday culture, about the tradition of courtesy and why not to presume upon it. Learn some humility. If you do these things, then we all have a much better chance to survive, here and everywhere else, without making enemies of people who should, who MUST, be our friends.

None of our people, not any, will be able to stay in one place for more than a year or so in the coming times. What's happening to us in the cities and now on the land, here in New Mexico, is clear: the process of our elimination from the society that made and is outlawing us is speeding up and getting bloodier. Either we get ourselves together and get together with the other embattled and oppressed people, or get blown away. This next year in New Mexico could be tragic. It could also be a new beginning.

All in all, things are very uptight now, and they'll probably get worse during the summer. We're writing because, besides wanting you to know what's happening, we feel it might be better if people not come here without understanding the complexity of the situation, and perhaps even let things get cooled out before coming at all.

The above was printed in the San Francisco *Good Times*, an underground paper of consistently cheery and useful outlook. They printed a 2-page spread of items from the CATALOG along with a brief friendly review which had greater effect on our mail than any notice we've received except possibly *Scientific American's*. As far as we're concerned, any publication is welcome to 2-3 pages of our stuff any time. It's nice if credit and access info is given.

Fuller, hm.

Which leads me on to say a bit about Bucky Fuller, since he seems to have become the patron saint of whatever is coming. I have great respect for Fuller's designs, but what your reviewer missed about Ideas and Integrities is that a close reading will reveal a really frightening social picture of the future. At least through Fuller's eyes, there is small place for the social equality and interaction most people want to see happen. Fuller's future has two classes: the designers who do all the thinking and organizing and running of an incredibly complex world-wide technology, and everybody else who, no matter what else they do, must continually consume so that the great world machine can continue to run. The whole thing is a vast circular assembly line that must ever feed on itself or break down. Both designers and consumers gain all meaning in their lives from their relation to the organization, but at least the designers have some say in the direction of the future; the masses can only follow and consume. Consumption equals metaphysical meaning.

"How, then, does the industrial equation go on? What is man's relationship to it? The answer is that the larger the number served by the industrial equation, the more unit costs are lowered and the more universally its regenerative pattern simulations become distributed. This is to say that the greater the number of consumers, the more successful the industrial equation. The more people served, the more regenerative industry becomes. Industrial equation works toward man having infinite significance in the universe as a regenerative consumer." p. 54

"The biological competition (inherent in evolution) to accelerate standards of satisfaction bi-polarizes in total world struggle for management of the industrial complex. Continuous courting of world society as potential consumer by competitive world managements looms." p. 209

"This comprehensive design will include not only the network means of production, distribution, maintenance, search, research and continual improvement of service, but also the continual methodical withdrawal of progressively obsolete facilities tonnage, its reprocessing and recirculation at even higher performance ratios per pound of physical resource investment—together with design of the economic implementation of greater numbers of consumers to match the increasingly tooled-up production capabilities, and together with designed consumer traffic patterning, controls permitting higher frequencies and velocities of electively enjoyed services devoid of individual interference incidents and restraints." p. 247

But isn't this only a bigger, grander, uglier version of what is wrong with this country now? Can you imagine how a world management would deal with a drop-out that went out and made his own instead of consuming his quota? Euthanasia, obviously; nothing else is efficient.

In the January Supplement, page 18, there is a reprint of an article by Arthur I. Waskow describing three schools of futurists. Whichever school is right, it is obvious that the eliteist technocrats are wrong. It is equally obvious that Bucky Fuller is an eliteist designer, and that he is wrong, too.

In Nine Chains to the Moon, there is a passage (or passages) which graphically and frighteningly demonstrate Fuller's social structures. It concerns the creation of a Bible for "the populace" of the planet 80XK23 by the priests of the reigning faith, the scientists.

"After our scientists had completed the bible as a rational abstract, 'THE GAME OF LIFE,' in explanation of duality delusion, we evolved our resolution...which represented a mutually agreeable method and process, for eliminating the fabric of delusion from our populace." p. 360

"Having completed our RESOLUTION in this scientific manner...we made a few actual tests of its efficacy by exposing ADVANCED, COMMUNALLY SCALED INSTRUMENTS to the populace and by leaving these instruments in unattended evidence.

"We then accelerated inevitable EMERGENCIES and found that the populace immediately seized on the AVAILABLE NEW INSTRUMENTS in the emergency, due to such instruments' superior efficiency to that of any they had had before.

"Before the emergency their snobbery of the instruments had been excruciatingly amusing. We thus proved that our principle of social motivation into self-cleansing, through scientific-devices simply-exposed, was correct." pp. 365-66 (All emphasis Fuller's)

How would you dig being a member of Fuller's 'populace', what with artificially accelerated emergencies (wars, depressions, famines?) being let loose on you by scientists that could really only be called mad?

Do you remember the bit in Orwell's 1984 where random rockets fall on the city, and nobody knows if they are fired by the 'enemy', or by the government to keep the 'populace' at once afraid and patriotic?

I know you said that it was Fuller's insights that initiated the Catalogue. I think it's a great thing, the Catalogue. I only ask you to look a little closer at your guru.

Yours

Cary James
Mill Valley, California

Cartridge Television

IMPORTANT HORIZON

EVR Electronic Video Recording

Due in July 1970 from CBS and Motorola a new and ultimate format. A new process which means that 8, super8, 16 and 35mm film and video tape can be transferred at computer speed to EVR film. The EVR film cartridge is played on its player, retail \$790.00, which is hooked up by a single cable to a standard television set. This eliminates a number of problems. Like having 5 different projectors, Like many useless films will not be converted to this format, Like it is a chance for independent makers to distribute and develop new courses, educational ideas, etc.

Write: James Katavolos
Director, Educational Marketing
CBS-EVR
51 West 52 Street
N. Y., N. Y. 10019

I attended a press conference on EVR in LA, the second showing of the system, as a representative of the catalog. He was interested in the catalog and would like to receive a complimentary copy. As he is a young guy and in a strategic position, vis a vis the establishment, it would be worthwhile to keep in touch with. EVR looks fantastic. Like long playing records are to a record player, the EVR cartridge is to the EVR player. The player has no recording capabilities, it is simply a playing machine. But one so simple to use and standardized (all film and video libs. and distributors are switching to this format) and small and lightweight (7½" and 2 lbs; think of storage and mailing) and silent (no projector noise) and has the visual advantages of TV (immediacy) and eventual capability of 600 line TV (vs 225 line today) that it will supercede anything else. It will transform education.

Chip Chappell
North Hollywood, CA

From ONYX

We have a technique (magic) for getting stuff through the mails faster. It has had complete effectiveness over the last few years except for 1 or two minor instances. It works like this: After 2 or three weeks, if it hasn't arrived, send a letter bitching about inaction. Invariably the item arrives the first or second day after you've posted your bitch. You're a good example; two days after our letter to you everything requested arrived. In spades.

ONYX further suggests:

Plastics World and Design News magazines Cahners Publications in Denver or Boulder, Colo. These are technologically mind-bending magazines. At the back are reader-service cards; on checking appropriate numbers, info will be sent by manufacturers advertising in the magazine and reprints of articles will be sent. The magazines are expensive to subscribe to but if you qualify, they are free, being a limited circulation type of mag. A recent sampling of info we've received includes Eastman 910 cement (super), Briskeat Catalog (plug in tape or fabrics which radiate HEAT), Master compressed air Flameless torches, Slide Lubricants Cat., Kett Tool Co., catalog w/info on the Kett Panel Master Saw—great for car tops!

The Master Flameless Torch might be worth looking into: Master Appliance Corporation, 1745 Hett Avenue, PO Box 545, Racine, Wisc., 53403

Also the Kett saw:

The Kett Tool Company
5055 Madison Road
Cincinnati, Ohio 45227

How about Hanscom—Ties; they are paper or plastic wrapped wire in any length for quick tying and wrapping. Cheap.

H. F. Hanscom & Co., Inc.
225 Chapman Street
Providence, R.I. 02905
for free samples.

'I.F. Stone's Weekly'
Now Published Bi-Weekly
5618 Nebraska Ave., N.W.
Washington, D. C. 20015 (some tool)

For a free sample copy send a stamped self-addressed envelope.

We're involved in exploring:

1. The Use of a consistently minimal dimension about which to organize a living space.
2. The use of planar or columnar elements to relate living spaces to the solar system and universe.
3. The use of commonly centered cylinders and the flexible possibilities of their revolution within and without each other as a tool.
4. A 28 hour day, six day week.

and too many more.

ONYX
406E83
NYC10028USA

From Droppers

Hello.

Do you have, or does anyone know what are recent court decisions or laws concerning keeping kids out of local schools? We aren't near good schools for kids and want to teach them here in our community. We don't have anyone with a teaching certificate and are not far enough in the mountains or mobile enough to keep them out. Seems that to really do all the things that need to be done, we need to find way to treat kids as people in ways that don't kill them.

The Catalog keeps on getting better. Though there is almost too much stuff in it to see it all. Seems that a direction to go in would be to print up more information in the Catalog as well as sources of info. The letter sections are groovy. In a previous Supplement you had this solar heater, still, but would have been better to clearly describe principle rather than blueprint. Heater could easily be invented from clear principle.

Droppers
Drop City
Rt 1 Box 125
Trinidad, Colo. 81082

From John Holt

A number of years ago, in THE NATION, David Cort ran an article called "The Unspeakable Germ," about the problems and possibility of using human feces as fertilizer. He happened to mention that a commercial rose grower in Darien, Conn. named Stanley Bullpitt had developed a way to use, not only human feces, but also shredded up newspapers to make a useful compost. At the time of writing, Bullpitt was getting some static from his neighbors, who had apparently gotten word of his dreadful doings, and I never did find out how the whole thing came out. It seems to me that this might be something worth investigating. I have recently sent a letter off to THE NATION asking them what happened, but you might get on it yourself.

In general, there are not, as far as I know, good sources of information about people starting their own schools. A friend of mine, Denny Wilcher, head of the Walden Center Community School in Berkeley, is doing some research on some of the libertarian schools and hopes to have a book out within a year or two. He probably has as good information about that as anyone.

On low-cost book purchasing I have a couple of tips. The Discovery Book Shop at 245 Columbus Ave. in San Francisco sells new books at 1/3 off the regular price. What is even more important, at least to music lovers like myself, is that they sell records, both popular and classical which are virtually brand new, played once or twice by a reviewer or radio station—at the extraordinary price of \$2.00 for a \$5.98 list price record. The low cost labels go for around \$1.00. This is a tremendous bargain, and should make it possible for schools so inclined to build up a pretty good collection without too much money. Another good source is The Twelfth House, on Haste in Berkeley. Their prices are not quite so low, but their records are all in mint condition, and the guy running the joint, Bennett Tarshish, is a very good guy.

However, what I was originally thinking of, is that many of the books originally published in this country are also published in Great Britain and can be ordered there for not much more than half of what they cost here. You have to order through a British book store. There are a number in London, but the one from whom I have had the best service is Blackwell's; Broadstreet, Oxford. From them you can get a catalogue. You can also get from them a catalogue of paperback books in print in Britain, and more specifically Penguin Books. British Penguins has a lot of superb titles that are not available in this country, and in any case they are cheaper than the American Penguins.

Best,

John
Boston, Mass.

From Nancy Buckley Press

Dear Whole Earth Catalog—

1. Add to your foam supplier list:

Douglas & Sturgess
730 Bryant St.
San Francisco

Lloyd Fox, the guy who runs the place, sells an impure foam which works in a 1 to 1 ratio, is brown in color (turns green to turquoise in the sun), & seems to be easier to work with than the pure, white kind.

His prices are (or used to be) slightly lower than other outlets. 1 gal. unit (20 lbs) is \$23.75 (or thereabouts). 100 lbs is about \$100.00. 1000 lbs. is \$700 something.

I have never used this foam in the spraying method, but it pours well as long as it is indoors at 60 to 80°.

Lloyd will furnish a spec sheet on request.

2. Ran across a fine book in a Colorado library. Have since discovered it is out of print, but it had 5 or 6 editions so it might come out again. Handicraft: Simplified Procedure & Projects by Lester Griswold; Prentice-Hall. It contains a fantastic amount of info. for example: leather working (from tanning to making leather garments and moccasins), basket weaving (even using pine needles), how to make back packs, baby carriers, knotted hammocks; braiding, plaiting, & knotting; lapidary work, silver jewelry, etc. It costs about \$10.00 but is worth it. Have been trying to run down a copy for months.

Nancy Buckley Press

It Says Here

Moving On

One early evening in my senior year at Holy Cross College, Worcester, Mass., just before stepping onto the crossover into Loyola Hall, I stopped stoned. Like lightning, I "wanted a want"—a big one, sharp, and jagged. I wanted to swallow the whole wide world in one gulp. To get to the last alley in the world and meet the last person walking down it. Ah so!

Frankly, I haven't pulled it off. But I've tried.

At least, the long looking has made me lean, lean as a needle with a hole in it. My eyes have gone gimlet, legs gone skinny. Add New England bones, 4 years in the Iraqi Deserts, a dozen years in the Great Tramp Territory west of Denver to the Pacific. No matter how you mix it, it comes out a slim stew.

You say—like you really cared—"What in the world have you been looking for?"

"Don't laugh. I'll tell you. A horse. A horse named Freedom. 'Freedom,' says Matthew Arnold, 'is a horse but a horse is meant to go somewhere.' He sure is, has."

When I stood years ago in front of Loyola Hall with my mouth open, the horse was at an easy trot. Long since he'd finished his pioneer walk from Plymouth Rock to the Pacific, dragging that covered wagon behind him. As a reward for that Grand Tour, the people built him a big red barn. Time since has proved him right in not settling so cheap. That kind of pioneer paradise can now be produced by a pushbutton.

From the 'solid', 'thingy' walk, Freedom shifted into a 'thinking' trot. Not only by the sweat of our brow but by the cleverness thereof, would we eat bread. Much bread. The great American dream became Things & Think, Inc.—everything under control and a few beautiful people at the controls. As a trotting reward, the Corporation has built a beautifully decorated baroque stable. BUT THE HORSE HAS SPLIT OUT! Once again, off and running down the cold cement. The only thing now left behind is the empty stable, the 'soiled' straw, and the bad smell.

Now, 1969, no other when, the horse named Freedom is about to break into a full gallop, third gear. Up until now, in the walk, the trot (1st and 2nd gear), the harness, the bit and bridle have been in control. The control has been from without. Horse and rider, freedom and people, just puppets pulled on a string.

In the full gallop, both horse and rider are running free in the wind, glued into one shared spirit. You and I, not the horse, then drop the blinds from our eyes. Things, thoughts, stones, tree, dogs, that man in the last alley whatever his color—the whole world racing by—is caught up in the shape and mass of a single Big Man. The control is from within.

Freedom at full gallop is Celebration. The Big Man's general dance. Red barns full of oats won't hold him. Nor corrals built by cleverness. The entire range of America from Atlantic to Pacific would still cramp his style. Oppenheimer, the physicist, says "the universe has become a wild windy place." Only the swift spiral of Celebration is big enough to swallow the world at a single gulp.

We're all waiting for the shift into third: Czechoslovakia, Vietnam, the black man, students, ghettos, Wall Street, Roman Curia, hippies and housewives. The little ones, the beautiful people, are coming out of the highways and the hedges. The whole world has become one big waiting room, a Greyhound Bus Terminal at 3 A.M. The stranded sitting by pitiful little piles of luggage in the fluorescent emptiness.

The clutch is in. Who has not somehow felt it grabbing at his entrails? The shift can hardly be smooth and easy. The world is not a Volkswagen. The only way to get into third gear may be a violent grinding slam.

In all the doubt, despair, violence and madness, we have somehow to take our eyes from the clutch on the floor and fix them instead on the Celebration ahead. Even the worst kind of madness has a ring of reason to it. The best reason I know for this one of 1969 is:

The Big Man is in a hell of a hurry to get to his wedding on time! And you know what? This wild, silly, mixed-up bitch of a world is his bride. How about that!

Moving On
\$2/yr
P. O. Box 1349
San Francisco, CA 94101

Hark The Park

How does humanity have an idea? How does it get to where it believes it? Probably the same way an individual does. Through the focus of conflict. This spring the People's Park in Berkeley was one of the most visible and excruciating edges in the world. The energies brought to bear from Authority, Longhairs, Citizens, and Media amounted to diamond pressure. In terms of the local issue it was self-defeating; everyone wanted a fluid solution to the problem,

but under that kind of pressure rigidity is all you get, and rigidity's pain. Then perspective took notice, the world watched. And the whole thing came out the top of itself. "We're not going to use the Earth as a weapon. We're going to use it as a tool." No stones or bullets were thrown while 30,000 fans of fluidity strolled through Berkeley. War had turned into party. Something squirted loose and commenced to flow.



The Far-Out Park Party *Good Vibes in the Night*

After the march to People's Park yesterday the street people and students un-wound themselves in a scene reminiscent of a Roman bacchanale.

In People's Park Number 2, three huge bonfires were kindled. And as evening closed in, the people came massing into the park.

The groupies, the hippies, the heads, the "Asian Scholars for the Park," the SDS, the motorcycle freaks, the derelicts — everyone who is the community of Berkeley drifted through the firelight to settle down on the bare earth and release good vibes.

There wasn't a policeman in sight.

"It was a warm — but slightly bestial — scene," one observer commented.

By 9 p.m., some 3000 revellers had so jammed the tiny wedge of People's Park

2. that the overflow into Hearst avenue and Grant street was stopping traffic.

Over-all there was an incessant thrumming as the young people beat on garbage can lids, and oil cans. "It was a never-ending drumming session," said our observer. "No rhythm, except this kind of compulsive throbbing. When a drummer collapsed, unable to sustain the pace any longer, they'd haul him off like Peyote Indians, and another would slide into his place without missing a throb."

Early in the evening, the crowd took a rough-hewn table and four stalwarts held it over their heads. Then young girls were boosted on to the table top, and they whirled. "It was like the cossacks."

Repeatedly, when the table holders lost their balance the dancers, table, and hold-

ers-on careened toward the fire, and narrowly escaped tumbling in.

There was no disrobing it was a little too chilly for that. But plenty of dancing, though nothing formal: Just a long, weaving, swooping line of young bloods and chicks meandering in and out of the fire light.

They chanted — but no words. "Sounded savage," said our man.

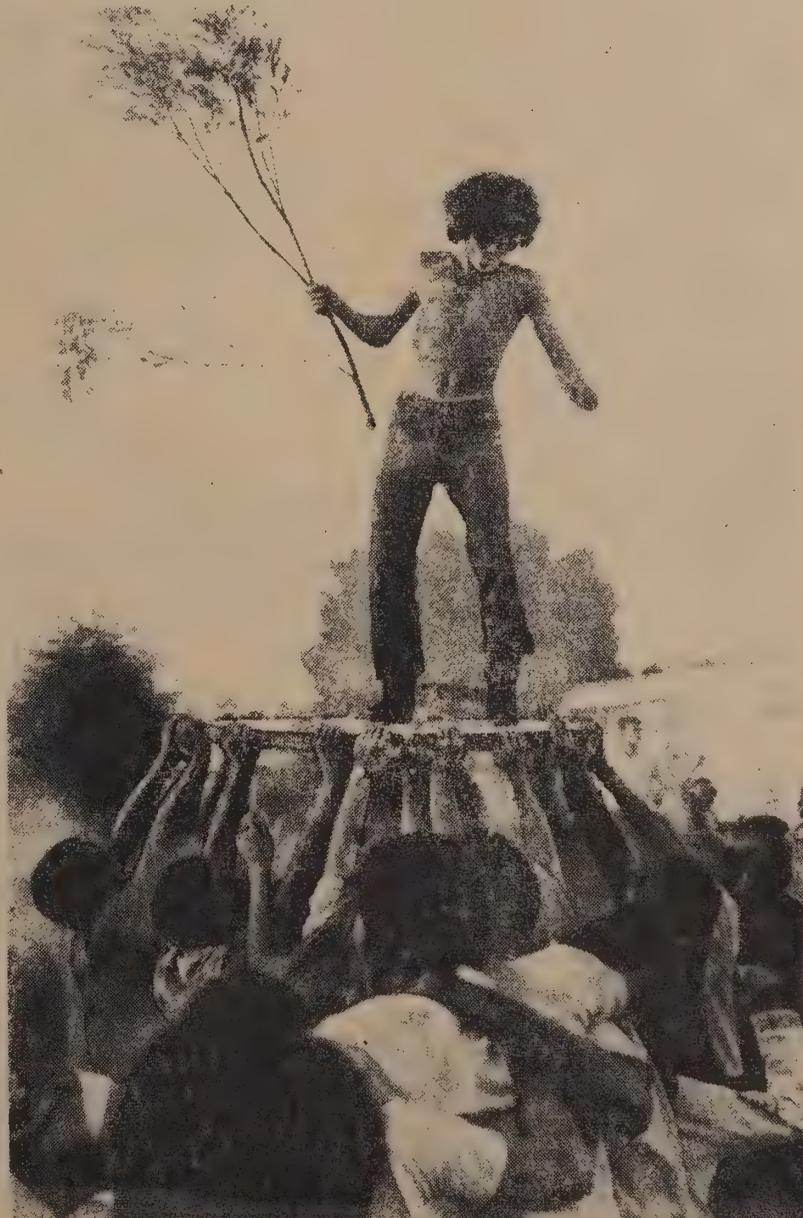
"This is a real return to the earth."

The young people did not even talk about their "victory," they were too busy enjoying the occasion.

Red Mountain half gallon jugs went the rounds and beer, and a few joints.

People drifted away more came.

The word in Berkeley last night was: "Sleep with a stranger."



Ecology and Revolutionary Thought

To sum up the critical message of ecology: If we diminish variety in the natural world, we debase its unity and wholeness. We destroy the forces making for natural harmony and stability, for a lasting equilibrium, and what is even more significant, we introduce an absolute retrogression in the development of the natural world, eventually rendering the environment unfit for advanced forms of life. To sum up the reconstructive message of ecology: If we wish to advance the unity and stability of the natural world, if we wish to harmonize it on ever higher levels of development, we must conserve and promote variety. To be sure, mere variety for its own sake is a vacuous goal. In nature, variety emerges spontaneously. The capacities of a new species are tested by the rigours of climate, by its ability to deal with predators, by its capacity to establish and enlarge its niche. Yet the species that succeeds in enlarging its niche in the environment also enlarges the ecological situation as a whole. To borrow E. A. Gutkind's phrase, it "expands the environment", both for itself and for the species with which it enters into a balanced relationship.*

*"Ecology and Revolutionary Thought"
Lewis Herber
Anarchos, Feb 69

PO Box 466
Peter Stuyvesant Station
New York, N. Y. 10009

Editor—S.F. Chron

Berkeley is the nation in microcosm. Think what fun we will have in 10 years when there are about 250 million of us. Not to mention about 4.5 billion people on this tired, polluted old mud ball. Stress, your magic spell is everywhere.

Mervin Giuntoli
San Jose

By Jerry Teller

One of the marchers did his thing as the sun set over Park No. 2

Space Law

An international "Treaty for Outer Space" was prepared at Geneva in 1966 with the following principles written in. The treaty is in the process of ratification by various nations. In April 1967 the U.S. Senate approved it 88 to 0.

- No nation can claim sovereignty to outer space, to the Moon or to other celestial bodies.
- All nations have the right to conduct space activities.
- No one may use outer space or celestial bodies to begin a war. The rules of the United Nations charter apply to space activities.
- No country may station in space or orbit around the Earth nuclear or other weapons of mass destruction.
- No country may install such weapons on a celestial body.
- No nation may establish military bases, installations, or fortifications on a celestial body. Nor may any weapon be tested or military maneuvers be conducted there. The right to visit another country's installations and space vehicles on a celestial body is guaranteed.
- Astronauts are envoys of mankind. If an astronaut lands on another country's soil he must be returned safely, promptly and unconditionally.
- Space activities and their results are to be reported for the benefit of all.

Discovery, Invention, Research from
Fritz Zwicky The Macmillan Company
1969; 276 Front and Brown Streets
\$6.95 Riverside, New Jersey 08075

We Have Met the Enemy

"We have met the enemy, and they are us."

Those are the words of Pogo, at once the wisest and the most innocent of the creatures in Walt Kelly's imaginary animal kingdom. Pogo's words have been worked into the shocker that opened May 16 at the American Museum of Natural History, a couple of miles uptown from our office here in New York City. They state what is probably the most arresting concept in the Museum's new show, "Can Man Survive?"—a solemn, chilling report on the lethal decay of man's environment on Earth. It's a show every engineer should see.

Our Dirt Clod

THE INnersPACE PROJECT © Jeff Berner

Outerspace and Innerspace are equally vast. They are probably the same thing. Our minds have been inter-planetary travellers for centuries. Now we want our hardware (rockets with human beings inside them) to go where our minds have dwelt. Touching foot to the moon and looking back will offer Mankind an opportunity for Liberation on Earth. The opportunity is to CHANGE PERSPECTIVE. Changes in perspective can pull us up out of the still-primeval stage of evolution we are just now discovering we have been in.

"Outerspace" is what small-minded people call the infinite areas surrounding planet Earth for eternities of visual and conceptual space. By visually SEEING Earth from "outerspace," by "looking back" to the ball called Earth (Earthball), Man can get a *mechanical glimpse* of himself OBJECTIVELY. It will "dawn on us" that our so-called civilization has been a petty, mis-managed, beehive of hallucination when we see the remarkably real/unreal, phantom clown-dance holy-trip vastness of Our Earth shimmering in eternity with a TOTALFIELD background of infinite nothingness/everthingness, with some "other planets besides our own," and a mathematical/unimaginable number of other suns winking at us from a "distant past distant past distant past" to NOW

Innerspace and Outerspace are equally vast. They are probably the same thing. The Earth IS in space, rotating at what we like to call "a thousand miles an hour" on its axis measured ("measured!") at the Equator; and Earthball is hurtling around the Sun at about "60,000 MPH," and don't forget: THE SUN IS A STAR. You get Startanned at the beach. "Use such-and-such a grease, and get a Startan-you can be proud of!!"

Space exploration will probably blow everyone's mind just in time to prevent "our extinction."

Space exploration will change our literal, geometric concepts and perspectives. Just as we can now see global weather patterns, the "true" shape of continents, etc., via camera-bearing satellites, we will get more and more of the big picture from the moon. We will be able to understand "whole systems." We will see directly with our eyeballs or via photos and live pictures, Planet Earthball, and we will recognize ourselves at last:

Intensive Course In Small Craft Design Scheduled

A five-day intensive course in the design of small craft will be given during the week of Oct. 6-10. The course is being offered by the Dept. of Naval Architecture and Marine Engineering, through The University of Michigan's Engineering Summer Conferences organization.

The course will cover the engineering fundamentals involved in the hydrodynamic, machinery and structural aspects of the design of small commercial, pleasure and naval vessels; give examples of application, and feature lectures by authorities in various pertinent fields.

The course is intended for persons with a background in naval architecture and marine engineering who are interested in small craft design. The material presented will be found useful by the naval architect who needs to know more about propulsion machinery, for the machinery

specialist who wishes to get an idea of naval architectural problems and for designers who need an insight into fundamentals or who want advanced information in the several areas.

A formal announcement of the course will be mailed to prospective attendees in August, and will contain an application form. Meanwhile, questions can be addressed to J. B. Woodward or J. K. Moss of The University of Michigan, Dept. of Naval Architecture and Marine Engineering, Ann Arbor, Mich. 48104.

Clam Flats Closed

WELLS, ME. — The clam flats in this town will not open this year because of polluted water in and around the Webhannet River estuary. The chief cause for the pollution has been blamed on cottage cesspools.

May, 1969

The National Fisherman

\$4.00 for one year

from 22 Main Street
Camden, Maine 04843

Editorial, June 2, '69
Product Engineering
\$15/yr
P. O. Box 430
Hightstown, N. J. 08520

Inflated Plastic Greenhouses

Inflated plastic greenhouses have been built, costing only about 15 cents per square foot, near the fishing community of Puerto Penasco on the Gulf of California. This location provides bright and plentiful sunlight almost every day of the year, but this is coupled with almost a complete absence of fresh water. The enclosed plants are grown in an atmosphere of approximately 100 per cent relative humidity and 1,000 ppm. of carbon dioxide (the normal outdoor figure is 300), thereby reducing the water requirements to 1 to 5 per cent of normal. The unlimited sea water is used for cooling in the summer and heating in the winter. (The direction in which such schemes may go in the future is described in another article in this issue by Edward A. Mason.)

"Food Supply: The Fruits of Research"
Sylvan H. Wittwer
Technology Review, March 69

TECHNOLOGY REVIEW
Room E19-430
MIT
Cambridge, Mass. 02139
\$1.00 per copy
\$7.00 per year
\$8.00 Canada & foreign countries

Concerning Seniority

AD-684 092 -- LEADERSHIP EXPERIENCE AND LEADER PERFORMANCE - ANOTHER HYPOTHESIS SHOT TO HELL, F. E. Fiedler, Univ. of Illinois, Urbana, for the Navy, Dec. 68, 28p. . . . Tests the hypothesis that number of years of supervisory experience will correlate positively with leadership performance as measured by group productivity.

U.S. Department of Commerce
Clearinghouse for Federal Scientific & Technical Information
Springfield, Va. 22151

We will flash on the realization that we actually exist out there . . . I mean "down here" . . . there's no more UP and DOWN, without gravity to "tell us" which is which . . . hey! LOOK AT US! We will see PLANET Earth and recognize ourselves as a human race, the same way an individual seeing his own photograph for the first time "recognizes" the *strange face* (his own) in the photo.

It will provide unemotional consciousness of the Earth/Self, and will bring a new millennium of consciousness.

Jeff Berner appears as guest columnist this month with an essay that "will constitute the essence of the introduction for my book, The Innerspace Project, which is coming out through Macmillan." He is, in fact, preparing three books and a board game for the Macmillan Company. Mr. Berner has written a column in the Sunday Chronicle under the heading "Astronauts of Inner Space." He resides in Sausalito.

—the editor

Intersection Newsletter
756 Union St.
San Francisco, CA 94133

Monthly, free.
Sure good for a free thing.

God sez

The truth is what you can USE.

Mel Lyman

American Avatar
\$10/yr
27 Fort Ave.
Roxbury, Mass. 02119

It Takes a Bug

Rather than poison your backyard with man-made chemicals that kill soil bacteria, earthworms, birds, bees and ladybugs as well as insect pests, why not populate your garden with ladybugs and mantids. (Or, mantis; mantises.)

Possibly the hungriest alive, ladybugs vacuum up many times their weight in aphids, mealybugs and other pests; and only cost \$2 for a half pint, or \$3 a pint.

As summer warms and caterpillars become your major garden pest, Chinese Praying Mantids meet the challenge by gobbling those caterpillars faster than kids eat corn-chips. Mantids, who begin life as tiny, voracious beasts, eating practically every insect, are completely harmless to people, plants and ladybugs. Mantids cost \$2 for 4 egg cases; \$4 for more at thirty cents each.

Populate your garden NOW with ladybugs and mantids, and quit worrying about week-end spraying! Order now, just blast your plants clean of early aphids with the hose while you wait for your predators to arrive, follow the simple directions when they come, then enjoy your garden nature's way.

SRI Intercom

(From Tuli Kupferberg's 1001 Ways to Live Without Working)

WHERE AND HOW TO GET FREE LAND

If the rewards of taming free land strike you as great enough to outweigh the risks, land is still available in the West and Alaska. Most of it, like Diamond Valley, is marginal for farming. Over the long pull, one out of every seven applicants is granted entry to the claim he wants. One out of three who get entry eventually prove up and get patent to the land. Still, determined men do make it. About 270 patents are granted annually.

Although the U.S. generally insists only that a claimant be an American citizen who can demonstrate a reasonable chance of success on the claim, requirements do vary with local conditions. Full information is available from the Bureau of Land Management, Department of the Interior. It's usually best to write or visit the Bureau offices located in the region that interests you. Here is a list of addresses in regions where there is still land for the taming.

AREA	ADDRESS
Alaska	Cordova Building, 555 Cordova St., Anchorage
Arizona	3204 Federal Bldg., 230 N. First Ave., P.O. Box 148, Phoenix
California	Federal Bldg., and U.S. Court house, 650 Capitol Ave., Sacramento
Colorado	910 Fifteenth St., Denver
Idaho	323 Federal Bldg., Boise
Montana, North Dakota, South Dakota	1245 N. 29th St., Billings, Montana
Nevada	560 Mill St., Reno
New Mexico, Oklahoma	113 Washington Ave., Santa Fé, New Mexico
Oregon	710 N.E. Holladay, Portland
Utah	Darling Bldg., Salt Lake City
Washington	670 Bon Marche Bldg., N. 214 Wall, Spokane
Wyoming, Kansas, Nebraska	2002 Capital Avenue, Cheyenne, Wyoming

From Roger Knights

An Interview With Dick Baker

If you're being attacked by somebody with a knife, and you think dualistically, it's terrible only if you compare yourself to someone who's not being attacked by somebody with a knife. But if the only thing life is at that moment, which is the only life you have, is the person you are when you're being attacked by somebody with a knife, then that's who you are. If you're in an airplane, and the airplane's going to crash, who you are at that moment is a person in an airplane crashing. You can't think you're a man on the ground who's not crashing. Now, if you get all in a sweat about it and wish you were on the ground not crashing, you're going to have a hell of a lot worse time than if you accept that definition of yourself and then do whatever is possible to get out of or improve that situation. But simultaneously accepting your identity with it. That's a very clear example. The cosmos defines you moment after moment.

Explorations Feb 69 \$6.75 per year, P. O. Box 1254
Berkeley, CA 94701

Foamed Plastics Chart

POLYURETHANE FOAMS

Type of material	Open Cell (Flexible)	Foam-in-place (Flexible)	Closed cell (Rigid)							Closed cell (Semi-rigid)	CELLULOSE ACETATE	PHENOLICS					UREA FORMAL-DEHYDE
			1.5-3	4-8	9-12	13-18	19-25	26-40	41-70			6-8	1/3 - 1 1/2	2-5	7-10	10-22	
Foams available	Slabs Sheets Blocks Custom shapes	2 and 3 package system for mixing on job	Boards, blocks, slabs; one-shot, two- and three-package systems for foam-in-place; for spray, pour, or froth-pour techniques.								Boards and rods, (rigid, closed cell foam)	Liquid resin for foaming-in-place					Block and Shred
Standard sizes	Max. width: 80 in.; max. length: 120 ft.; Thickness: 1/8-30 in.		Untrimmed blocks (yield 4 by 1 1/2 ft. by up to 12 ft. long); standard size boards; special shapes such as pipe coverings; foamed continuously or foamed in place.							Foamed-in-place	Boards: 1 x 4 in., 1/2 x 6 in., 1/2 x 8 in.; any length Rods: 2 1/4 in.; any length						Block: 20% x 10% x 4 1/2 in.
Density, lb. per cu. ft.	0.8-26.0	2-5	1.5-3	4-8	9-12	13-18	19-25	26-40	41-70	2.5-6	6-8	1/3 - 1 1/2	2-5	7-10	10-22	0.8-1.2	
Tensile strength, p.s.i.	10-50	13-150	15-95	90-290	230-450	475-700	775-1300	1350-2500	3000-8000	20-50	170	3-17	20-54	80-130	-	Poor	
Compression strength at 10% deflection	0.2-2 @ 25%	0.3-4 @ 25%	15-60	70-275	290-550	650-1100	1200-2000	2100-4000	5000-15000	-	125	2-15	22-85	158-300	300-1200	5	
Impact strength, ft. lb./in.	-	-	<0.05	-	-	0.32	-	0.45	0.45-1+	-	0.12	-	-	-	-	Poor	
Maximum service temperature, °F. Dry: Wet:	260-275 212	260-275 212	350	350	350	350	350	350	350	260-275 212	350		Continuous service at 300			120	
Flammability by ASTM D1692-59T	Burnable, but self-extinguishing or non-burning when compounded		Burnable, but can be formulated to be self-extinguishing or non-burning								Burns slowly	Self-extinguishing					-
Thermal conductivity, Btu/sq. ft./hr./°F. /in.			Blown with fluorocarbon								0.31	0.21-0.28	0.20-0.22	0.24-0.28	-	0.18-0.21	
			0.11-0.17	0.15-0.21	0.23-0.27	0.28-0.34	0.36-0.44	-	-	-							
			Blown with CO ₂														
	0.2-0.25 @ 2 lb. per cu. ft. density	0.3 @ 2 lb. per cu. ft. density	0.23	0.21-0.29	0.31-0.35	0.36-0.40	0.42-0.52	-	-	-							
Coefficient of linear expansion, 10 ⁻⁵ in./in./°F.	-	-	3-8	4	4	4	4	4	4	-	2.5	-	0.5	-	-	-	
Dielectric constant	1.0-1.5	1.1	1.05	1.10	1.2	1.3	1.4	1.5	-	-	1.12	-	-	1.19-1.2	1.19-1.2	-	
Dissipation factor @ 28°C. and 1 meg.	-	-	-	0.0018	0.0032	0.0055	-	-	-	-	-	-	-	0.028-0.031	0.028-0.031	-	
Loss tangent x 10 ⁻³	0.5	0.5	0.3-1.3 @ 10 ³ to 10 ⁹ cycles			2	3	4	-	-	-	-	-	-	-	-	
Water vapor transmission, in.	-	-	1-3	-	-	-	-	-	-	-	-	-	-	-	-	-	
Water absorption, % by volume	-	-	1-2 @ 2 lb./cu. ft.	1.8	0.8	0.4	0.2	-	-	-	13-17 @ 100% R.H. 1.9-2.5 @ 50% R.H.	-	2 lb./ft. ³ 2074 g per day/m ²	5 lb./ft. ³ 1844 g per day/m ²	13-51 @ 100% R.H. 1-4 @ 50% R.H.	10-15 @ 100% R.H. 1-5 @ 50% R.H.	-

Type of material	POLYSTYRENE										STYRENE ACRYLONITRILE	SILICONES	POLYVINYL CHLORIDE			POLYETHYLENE		POLYPROPYLENE HIGH DENSITY FOAM	EPOXIES								
	1	2	5	1.8	2.3-2.6	3.3-4.3	6	8	10	0.5			0.8	1	14	32	3-70		10 and up	4-25	1.9-2.6	35	35	1.8-2	2-2.3		
Foams available	Products or shapes molded from expandable beads; finished boards										Extruded boards, planks and logs	Extruded film and sheet	Products or shapes molded from expandable beads; finished boards	Powder	Liquid or paste	Flat stock in sheets and rolls; cored cushions & other molded shapes; compounds	Sheets and molded shapes	Planks, rods, sheets, tubing and rounds	Molded parts and shapes with solid integral skin, density typically 25-50 lb./cu. ft.	Molded parts and shapes with integral skin	2-package systems (liquid)						
Standard sizes	Finished boards: 48 in. long; 12, 18 and 24 in. wide; 1 through 4 in. thick, finished boards (loose): 18 to 144 in. long, 12 to 48 in. wide; 1 to 8 in. thick. Untrimmed blocks: 2 x 12 ft. x 18 in. and 4 x 12 ft. x 18 in.										Boards: 12, 16, 24 in. wide; 1 to 4 in. thick; 8 or 9 ft. long. Planks: 6 x 12 in. x 9 ft.; 6 x 13 in. x 9 ft.; 6 x 16 in. x 9 ft.; 7 x 14 in. x 9 ft.; 7 x 20 in. x 9 ft.; 10 x 20 in. x 9 ft.; 10 x 24 in. x 9 ft.	0.0005-0.125 in. thick up to 48 in. wide	Boards: 1 through 8 in. thick; 16, 24, 46 in. wide; up to 96 in. long. Billets: 16 x 24 x 96 in. 16 x 46 x 96 in. Roll: 3/8 in. x 24 in. wide x 150 ft. long.	Foamed in place @ 320°F. Cell size less than 0.08 in. Heat cure flexible	Foamed in place 3-30 lb./cu. ft. @ 310-400°F. closed or open cell, atmospheric or pressure molded	1/16 to 2 1/2 in. thick 24 to 54 in. wide	1/16 to 2 1/2 in. thick 36 x 44 in. wide	Planks, 1 1/2 x 24 in. x 9 ft. max. Ovals: 2 x 5 1/2 in. x 9 ft. max. Rounds: 2 to 6 in. Rods: 1/4 to 1 in. Sheets: 1/4 x 48 in. x 500 ft.; 1/2 x 48 in. x 250 ft.; 3/4 x 48 in. x 125 ft. max. Tubing: I.D. 1/4 to 1 1/2 in. x 9 ft.	Molded parts and shapes with integral skin	Molded parts and shapes with integral skin							
Density, lb. - cu. ft.	1.25	1	2	5	1.8	2.3-2.6	3.3-4.3	6	8	10	0.5	0.8	1	14	32	3-70	10 and up	4-25	1.9-2.6	35	35	1.8-2	2-2.3				
Tensile strength, p.s.i.	29-31	21-28	54-68	148-172	55-70	60-105	180-200	300-500	400-700	600-1000	-	20	30	-	-	50-3000	10-200	-	20-30	1200	1600	26-31	-				
Compression strength at 10% deflection	17-24	13-18	25-40	95-115	16-32	30-80	120-130	42.5	52.5	68.0	1.5 @ 5%	6 @ 5%	8 @ 5%	200	325	-	-	-	5 @ 10%	1300	2100	13-17	20-26				
Impact strength, ft. lb./in.	-	.14	.21	.20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	260	260	-				
Maximum service temperature, °F. Dry: Wet:	167-185										165-175	170-175	175	175	170-190	700	175	125-225	160	230	230	160	200				
Flammability by ASTM D1692-59T	All self-extinguishing when compounded										S.E. when compounded	Non-flammable	S.E.	S.E.	S.E.	Slow burn	Slow burn	0.87	S.E.	-							
Thermal conductivity, Btu/sq. ft./hr./°F. /in.	0.245 @ 70°F. mean temp.	0.255-0.26 @ 70°F. mean temp.	0.23-0.24	0.25	<0.21-0.28 @ 70°F. mean temp.					0.24 (@ 70°F. mean temp.)			0.32	0.29	0.29	0.30	0.30	Depending on density	Depending on density	-	0.35-0.40	0.92	4.2	0.11-0.12	0.11-0.13		
Coefficient of linear expansion, 10 ⁻⁵ in./in./°F.	1.8-7.4										3-4	-	-	-	-	-	-	-	-	9.5	4.18	-	-	-			
Dielectric constant	1.02-1.06 @ 10 ² to 10 ⁶ cycles										<1.05 @ 10 ² to 10 ⁸ cps	1.27	-	1.28	-	-	-	-	-	-	-	-	-	-	-		
Dissipation factor @ 28°C. and 1 meg.	0.0001-0.0007 @ 10 ² to 10 ⁶ cycles										<0.0004 @ 10 ³ to 10 ⁸ cps	0.00011	-	0.00015	-	-	-	-	-	-	-	-	-	-	-		
Loss tangent x 10 ⁻³	-										-	-	-	-	-	-	-	-	-	-	-	-	-	-			
Water vapor transmission, in.	-	1.2-2.2	0.6-0.8	0.4-0.6	1-2	1.50	1.25	1.00	2-4	-	-	-	-	-	-	-	-	-	0.4	-	-	-	-				
Water absorption, % by volume	Nil to less than 3										Nil	Nil	Nil	Nil	-	-	-	-	5 max.	1 max.	0.22	-	-	-			

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Making It With Rock

This article appeared April 4, 1969 in the Berkeley Barb.

We tried by letter and phone to get hold of the author Ed Denson to see if it was all right to reprint his piece but we couldn't find him. The article's good enough we'll just have to pirate it through and hope it's OK. What I really hope is that it's part of a forthcoming book on music entrepreneurship; we'd CATALOG that in a minute.

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by ED Denson
(Editor's Note: ED Denson manages Country Joe and the Fish, and The Crabs, and other Rock bands.)

I - the band

First, of course, you'll need a band. There are over 100,000 rock bands in the United States at any given moment, or at least that's the number which participated in a national Battle of the Bands series last year. Not 1000 are making a living, so you should be a little careful when you pick yours.

More realistically, if you are interested in managing a band, probably you already have one. Deciding to be a manager is not a result of a serious conversation with your high school counselor, it's an accident like picking up the girl who is to become your wife. Probably you are sitting around one day with a bunch of your friends who are musicians and complaining. You inadvertently mention that Atrium Burlaping and the Watercrossers are making \$200 a night somewhere else, and zap, you're a manager. In that case you'll want to read this to decide whether to keep going or to forget it.

Let's start at the beginning: you as manager want a band which will do three things—make good music, make good money, and stay together for three years. These three things follow from the nature of the business you and the band are in.

Now at this point I should explain something before some nitwit begins to say "Oh wow man, music is not a business it's too beautiful", and that is this: if your band is not a business it does not need a manager. Anyone can play the guitar in his room without a manager, and when he gets tired of that he can go out into the park and play without a manager. Not everyone knows this, and it is the cause of a great deal of wasted time and energy.

No matter what your band says to you about business, they are hiring you to make them money, and fame, and glory, and one day they are going to ask you where it is.

Now to amplify those three things which you want your band to do:

1. MAKE GOOD MUSIC: you, a human being, are a valuable person and your time is worth spending in such a way that you won't think it wasted later. If your band is not making music which you think is good, or as we say in the trade, promising, forget it. Even if you think they'll make a million, but their music is not your bag, forget it. No one is so lame as a manager who can say "It's just a business with me, like selling cars or canned peas." No one. And no one can do less for a band than a manager who feels that way. We Americans, due to a peculiar hangover from Protestant religion, believe in the back of our minds that sincerity is the touchstone of truth, and a manager who cannot sincerely say that his band is great cannot hope to get anyone to do anything for it.

Then too, no band is successful that does not make good music. But, you say, leaping to your feet in indignation, what about all those creepy straight bands with their press agent hype and record company bullshit who are regularly crammed down the unknowing throats of the American public all of whom are idiots except me.

Forget it. There are certain delusions which you, as a member of the hip record buying public and brilliant critic of American taste, have been living with. You as a realistic hard-bitten business manager had better clean the garbage out of your head before you get going, or else your hangups will fuck up the lives of a number of people including yourself.

Try this one: Any band which successfully manages to become one of the really popular recording and performing groups in the country, does it by making good music, on well done records, giving exciting stage performances, and especially, by projecting values which their audience likes with some militance. You probably do not like their cultural values, which is not the same thing as their

Lindberg Crosses the Great Water

If we can combine our knowledge of science with the wisdom of wildness, if we can nurture civilization through roots in the primitive, man's potentialities appear to be unbounded. Through his evolving awareness, and his awareness of that awareness, he can merge with the miraculous—to which we can attach what better name than "God"? And in this merging, as long sensed by intuition but still only vaguely perceived by rationality, experience may travel without need for accompanying life.

Will we then find life to be only a stage, though an essential one, in a cosmic evolution of which

our evolving awareness is beginning to become aware? Will we discover that only without spaceships can we reach the galaxies; that only without cyclotrons can we know the interior of atoms? To venture beyond the fantastic accomplishments of this physically fantastic age, sensory perception must combine with the extrasensory, and I suspect that the two will prove to be different faces of each other. I believe it is through sensing and thinking about such concepts that great adventures of the future will be found.

Read the whole marvelous piece in July 4 Life Magazine. (\$8.75/year, 540 North Michigan Ave., Chicago, Illinois 60611.)



1935, Lindberg in New Mexico with rocket inventor Robert Goddard.

1969, conservationist Lindberg.

ments about the questions I've just mentioned, and if you are listening to a band in a small club, probably you can't hear the music well enough to tell anyhow. To serve as a double check on your opinion, if you think that they are making good music but you are not certain, go watch them per-

god given right to take drugs and drink anything anytime they want.

We're not talking about right, we're talking about putting on a shitty performance and boring or bum-tripping the audience. If your band puts on poor performances because your brilliant drummer is out of his mind on something,

your band. From the onset everyone involved should realize that in the next three years some of the musicians are going to receive public praise for being the brilliant men who are really making the band go, and the private advice to dump everyone else. If they are a little nuts in the start, they'll do something destructive, or flip out under the pressure. There's not a lot you can do about this except try to avoid such people. Watch a couple of rehearsals and you'll know if they are present. Bon don't panic if someone there is doing most of the work, watch for ill humor.

Now if you've got your band, and they are making good music well and are all ready to go out and make music for the millions, the next steep is to check your own head and be certain that you are capable of being a manager. You have no real way of knowing what you are getting into, any more than the band does at this point. All of you are babes in the woods, but there are few things you can predict.

You are going to have to work hard for three years, with few breaks and little respite. You will work more hours than your band, and you will have to be much more stable than the musicians. That's one part of your job—to be stable and to know what's happening when they forget. A good deal of money will be flowing thru your hands, and you should be able to account for it in some detail, which means you'll have to keep good records and be precise.

Moreover you are going to have to do business with a lot of people, talking about performances, equipment, recording contracts, booking agencies, etc., and usually you are not going to know what you are talking about. You have to recall that, while not letting it out. If you are one who believes that business consists of a lot of people with desks and good looking secretaries bullshitting each other and doing a lot of public relations, you are going to fail. The business you do will show up in a growing number of contracts passing across your desk and that will be based on facts. Facts like how many people came to see your band.

But the most disturbing, and dangerous aspect of management is that the band is never going to know what you are doing, or how well you are doing it. On the one hand you will be subject to their occasional paranoia, instability, incoherence, mistrust, and unless you are exceptionally fortunate, their almost complete lack of ethics. On the other hand you will receive considerable unearned praise, and in most of your business dealings with them you will have your own inexperience and ethical state to contend with. You will do things which are dumb and you may easily cheat everyone in sight for a few months. If you think you can work under those conditions, you're all set.

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music being no good. However, a band, a guru, and a candidate for president all do the same thing and only those who are good at it make it.

But back to your band. Let's start with the basics. Is your band able to play in tune? And do they agree amongst themselves about rhythm? Most American bands can not both play in tune and together, and get really mad when someone points this out. If your band cannot do both it is going to take a great deal of luck, practice, and probably a couple of people fired to cure the problem. During that time nothing much can happen with their career, and they won't need you to hang around waiting.

Perhaps they can play in tune, together, and in public. Then we know they can make music, and now we wonder if they can make good music. Your taste is going to be the judge, but the question is not one that can be dodged with horseshit like "anything can be good music, it's all a question of taste." That's not true. If they are making good music, you can objectively show it.

First, there is the question of melodies, and chord and note choice. If there is someone in the band who is brilliant, and often there is, these things will be startling, and good. The band will be playing its own music, not anyone else's be it the Box Tops or Muddy Waters. If you want to work with musicians who are into playing other people's music, go work for the Symphony.

Are the songs any good? Do they make sense? Do they mean anything to you? Would you be impressed if someone walked up to you and said what these songs are saying?

Probably you don't know much about music. Probably you don't know enough to make final judge-

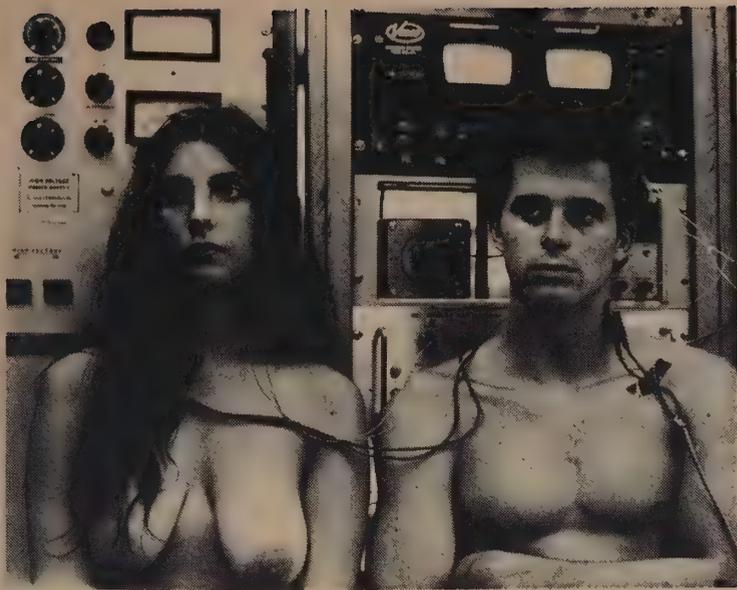
form at a local club and see if the audience is reacting well to the performance.

Well, means applauding each number, and yelling sometimes, getting excited. If this is not occurring then the band is either not making good music, or not making good music well, or in the wrong club.

For your purposes as a manager, unless you are independently wealthy, it is necessary for your band to make music well in that the audience wants to SEE the band make that music. Major attractions have two things in common: they symbolize something important to the audience, and they put on a good show. That is true of James Brown, that is true of the Budapest String Quartet. Perhaps your band does not want to be showmen, because that's all phoney and has nothing to do with great art. Don't let it worry you, they'll get out in the real world as soon as someone applauds them.

2. MAKE GOOD MONEY: It is possible to make good music without making good money, but it is hardly possible to make good money without making good music. It is also possible to make good music, and to blow it all for non-musical reasons. This is dumb.

Making money for music is a business. Your band will be hired by people to put on a show, at a certain place at a certain time. If they don't get there on time, in a condition to play, with a put together performance, they will not get hired very often. If someone in your band is chronically late or doesn't show up for a bunch of reasons, he has to go. Or you do. Then, too, people who use a lot of acid, or juice it up, will not play well dependably. They should go. Or you should. Even if they are nice guys, and you believe every human being has the



THE COWBOY FROM
ANT FARM

Libre

MAKE AN ALLOY
MAKE AN INVENTORY
COME TOGETHER WITH YOUR PEOPLE
FIND OUT WHAT EACH PERSON CAN DO
IS WILLING TO DO FOR THE COMMUNITY
LET EACH MAN USE HIS BROTHER
LET EACH OF US BE USED
IN AN ALLOY ALL THE BEST QUALITIES OF ITS
INGREDIENTS ARE FUSED INTO A NEW SUPER STUFF

THE STRONG EGOS BLEND
COMING TOGETHER
ALL ONE

MAKE AN ALLOY
MAKE AN INVENTORY

TO STOP POLLUTION EACH MAN-WOMAN MUST CLEAN
UP HIS OWN CYCLES

THE NETWORK OF PEOPLE DOING GOOD WORK GROWS
IT IS UP TO US TO MAINTAIN CALM & PURE ENERGY
NEGATIVE THOUGHTS POLLUTE OUR SURROUNDINGS

BUILDING YOUR OWN DOME

To build a dome first you find the spot/make sure it is your spot/the best place for you to be/then you drive a stake into the ground in the centre of your spot/tie a string to the stake decide what the radius of your home is to be/measure the radius on the string/scribe a circle on the earth using that radius/if you are building a 2 phase dome divide your circle into 10 equal parts (for a 4 phase dome divide circle into 20 equal parts)/drive a stake into each of the 10 or 20 divisions on the circumference of your circle/dig a hole 2 1/2 to 3 feet deep at each of the 10 or 20 points/the best way to dig holes—drive 1 1/2 + 1 1/2 inch pipe into ground 3 feet deep at each stake with sledge hammer/put 1/2 stick 40% dynamite primed in hole made by pipe/boom—nice hole/clean out with post hole digger.

Get creosoted RR ties or telephone poles/these can be scrounged/ place one in each hole set one piling perpendicular to earth using level/drive nail 1/2 way into top center of set piling/measure from nail in set piling to set second piling and so on around the circle. Use string level to level piling.

Decide how you want your floor/where you want plumbing—drains—etc. to be/put pilings where necessary to support floor/floor support pilings don't have to be set as deep as perimeter pilings/nail floor supports (joists—2 x 6's or bigger) to floor support pilings/deck with whatever's available—we used cull (bark on one side) 2 x 4's good side up.

Cut 3" PUC pipe into 4" lengths/drill 3/8" holes at 5 or 6 equal points on PUC for pentagonal and hexagonal hubs/cut 2 x 4 structural members to proper lengths and angles/drill 1/4" holes in centers of angled member ends.

Use 3/8" x 2" lag bolts with washers to fasten hubs to members/let bottom members 'float' until entire structure has been erected/use ratchet wrenches to screw hubs to members/4 or 5 people can center dome structure on floor/spike dome down to floor.

Cut skin material (exterior plywood—tempered masonite—sheet metal—celotex (very risky) into proper triangle sides/nail skin material to structural members/ring shank nails are best/3/8" skin material is good enough/2" is really good/4" is risky.

Sealing is hardest part of building dome/many methods may be used/ we haven't got a perfect answer so maybe you should experiment with sealers and calks—etc./fiberglass strips and epoxy works pretty good but is brittle and expensive/tar and membrane works pretty good but has to be redone every 2 years and is very funky to work with and looks funky/silicone sealant works good but it is very expensive/hypalon and neoprene calks work pretty good but are expensive/the hypalon



and neoprene calks are easiest to work with since they are applied with guns/we've just heard of a material used to cover calked fishing boat decks called HI-BALL you use it like fiberglass except burlap is used rather than fiberglass calk/we've also just heard about ferro-cement which sounds like the best system yet/it can be sprayed on/ the plastics are imperfect yet but much work is being done in that direction/plastics will soon evolve into the best and cheapest dome materials.

We use rock wool insulation/full thick (3 5/8") batts/stapled to the structural members and the exterior skin/one community used perlite for insulation/fiberglass batts also work but aren't as efficient as rock wool batts.

Use 1/4" sheet rock for [obliterated] /seams may be taped and spackled or not.

Put in doors and windows any way you like, using structural members as supports for glass and alter structural members to accommodate doors/in all the domes we've had anything to do with, the doors have been different/so there seems to be no set formula for doors and windows.

For covering the exterior skin use epoxy paint—or Alumination (a trailer paint made of powdered aluminum—asbestos fiber and tar)—or a really high quality paint.

Extra

THE FRONTIER DAYS WERE LAND OWNING, PUTTING DOWN ROOTS, SELF SUFFICIENT FARMER STABILITY. THE COWBOY WAS LIVING IN ANOTHER LIFE STYLE, SACRIFICING COMFORT FOR FREEDOM AND MOBILITY.

THE COWBOY NOMAD CARRIED ALL HIS LIFE SUPPORT SYSTEMS WITH HIM BEING RESTRICTED BY WHAT HIS VEHICLE (HORSE) COULD CARRY.

COWBOY NOMAD EQUIPMENT: SAFETY MATCHES/KWIK START ENERGY BANDANA/CLIMATE PROTECTION TOOL BED ROLL/THROW DOWN SLEEP ANYWHERE SADDLE BAGS/HAND CARRY STORAGE PAK SIDE IRON/TAKE YOUR OWN JUDICIAL

SOCIETY TODAY IS AMBIGUOUS, LAWS ENFORCE STATIC LIVING PATTERNS WITH VOTER RESIDENCY LAW, DRIVERS LICENSE STATE JURISDICTION, STATES RIGHTS KEEP YOU IN YOUR PLACE, IN A CIVILIZATION DESIGNED FOR MOBILITY. UNLIKE THE COWBOY, WE CAN GET QUICK FOOD, NEWS, SUPPLIES, ANYWHERE ON THE ROAD IN THE UNIVERSAL COMMERCIAL SERVICES MATRIX (YOU CAN GET COCA COLA ANYWHERE IN THE WORLD) THE HOWARD JOHNSONS ARE ALL THE SAME AS THE SEVEN ELEVEN, O-TOT-UM, PAK-A-SAK, LITTLE GENERAL, BABY GIANT, PIK-A-PAK, TOM THUMB MARKET. IF WE PUT YOU IN AN AMERICAN SUPERMARKET DISORIENTED TIME CLIP, HOW LONG WOULD IT TAKE YOU TO GUESS THE CITY YOU ARE IN?

YET THERE ARE COWBOY NOMADS TODAY, LIVING IN ANOTHER LIFE STYLE, AND WAITING FOR ELECTRONIC MEDIA, THAT EVERYONE KNOWS IS DOING IT, TO BLOW THE MINDS OF THE MIDDLE CLASS AMERICAN SUBURBANITE. WHILE THEY WAIT THE COWBOY NOMADS (OUTLAWS) SMOKE LOCO WEED AROUND ELECTRIC CAMPFIRES.

"WILL YOU BE STAYING HERE IN DODGE CITY, MR MAVERICK?"
"WELL MAM, I RECKON I'D GET AWFUL ITCHY BOOTS SITTING AROUND IN ONE PLACE VERY LONG."



"I'M NOT THE SETTLE IN' DOWN TYPE"

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Bill Dickinson says you can always get free reprints of articles in Scientific American, New Scientist, etc. by writing to the authors. They all have hundreds of copies.

Bob Lander Looks Healthy to Us

I'd like to recommend to you all the unbelievable virtues of the 'Green Medicine', or Hoffman's Mentha Fluid. I've been using it for years on everything from sore throats to infected fingers, headaches, toothaches, mosquito bites. It'll even get you high, if properly used and not too often. Be careful not to O.D. It comes with instructions covering several of its possible uses, including the suggestion that "Your own judgement should be the most important factor." It is made entirely of herbs and spices: "A pure extract of oriental mints, augmented with additional oils extracted from various medicinal herbs." I cannot recommend it highly enough, it has been my constant companion for years, having originally cured a repeated sore throat of serious proportions which our best antibiotics could hardly cope with.

Available from: Roma Imports, Co., Postal Station 'F', Box 5535, Vancouver 12, B. C., Canada. \$4 will get you a 35cc bottle.

Bob Lander
Box 593
Placitas, N. M. 87043

For ventilation put 3 or 4 hinged flaps in triangles around bottom layer of dome/these flaps can be sealed in winter/also there should be a vent in the top of the dome (a skylite that opens and closes is one way—a revolving vent is another way) to prevent condensation from forming on inside skin of dome.

Good Luck!!!!

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We got wind of the Technical Book Kit in the Peace Corps magazine Tech Notes (free from Office of Volunteer Support Peace Corps, Washington, D. C. 20525). Would anybody who's used any of these books like to comment on their field reliability?

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Legal Dope Making 1

HOME BREWING WITHOUT FAILURES by H. E. Bravery. ARC Books, Inc., 219 Park Avenue South, New York, N. Y. 10003. It's an interesting book, but awfully hard to use in this country, because it's very difficult to get decent materials for brewing. It is, after all, against the law to make your own beer (at least in California). Wine is legal; up to 200 gallons a year may be made by the head of a family (a real Italian law.) In Berkeley, for instance, you can buy Blue Ribbon canned malt extract at most large grocery stores, also probably corn sugar (dextrose) in most. You can buy a bottle capper and bottle caps, and a decent yeast starter at a winery. But Bravery's recipes call for a number of pretty esoteric ingredients.

There are two places to buy brewing supplies through the mail that offer a really good selection. One is Wine-Art Sales Ltd., 1108 Lonsdale, North Vancouver, B. C. This is the nicest mail order house I've ever dealt with. They have a free catalog of beer and wine making supplies. When you order from them, you send no money. They send you the stuff, and a bill, with a discount for American money, and you send them the remittance. I hope no one burns them, because its really nice to establish such a basis of trust in the cold mail order world. Shipping charges are not expensive, except on heavy stuff, and the wait is only about two weeks (to Calif.).

The other place is Semplex, Ltd., Old Hall Works, Stuart Road, Birkenhead, England. Free catalog. Lots of good stuff, but high shipping charges, and very long waits.

I would suggest that anyone who wants to get into beer making should use Bravery's book as a point of departure, maybe order some of those nice yeasts, particularly the liquid ones, and other small stuff from Canada or England, but make do with canned malt extract, locally available sugars (yellow-D is a good one, though beer made with it is sometimes a little hard to start), maybe some molasses for extra body.

You should know that Bravery's recipes generally make very, very heavy beer. The heavier the better for me, but its a long way from Lucky Lager, or even Heinekens and Tuborg. If you like light beer, use less sugar (use corn sugar, too), less malt, and more water. If you use a hydrometer, as Bravery recommends, you can figure out the alcohol content of your beer before you start it with the yeast.

Contrary to what a lot of people believe, a home brewer of at least thirty years experience told me to never save a yeast starter from batch to batch, but to start with a new and good one every time. Yeast gets contaminated with wild spores very easily, and your batches are likely to get worse and worse instead of better and better. Also, he says, you should ferment your beer at low temperatures, 60 degrees or lower, as at higher temperatures, the yeast starts producing alcohols you don't want, like toluene and acetone.

In general, the best way to brew is to experiment, and keep notes, so you can duplicate a really good batch when it comes along.

Roland Jacopetti
Berkeley, Calif.

Legal Dope Making 2

Making beer at home is technically illegal, but if you call it malt wine and have an Internal Revenue wine making permit (form 1541-free) then it's legal.

The best book available on the subject of home brewing is Brewing Better Beers by Ken Shales. This is a British book, and in being so, it is aimed primarily at the British home brewer. So a word of caution; British beer is not like American (or German) beer. When they talk about draught, they are talking about a beer that is flat and served at room temperature. The bottle beer is the same only slightly carbonated (the British and German beer that is imported into this country is geared for American tastes and alcoholic content laws).

If you want an American or German type of beer, turn to the chapter on lager beers.

The book is complete and concise, with a bit of British humor thrown in. The only thing that it doesn't explain is that a 'dust bin' is a British garbage can.

A word about supplies:

Malt syrup is available at most supermarkets at about \$1.50 for a 3 pound can. Try to avoid the malt syrup with the hopps flavoring as it doesn't have the right balance for most of the recipes. It is much better to add dried hops to plain malt syrup to get the proper flavor. Plain malt syrup may be hard to find in some places, but the health food stores usually carry it.

Brewing supplies are available from E. S. Kraus, P.O. Box 451, Nevada, Missouri 64772 (free catalog). (Beer yeast, hops, hydrometers, etc.).

Never use the brewers yeast that is available in the health food stores. This has been sterilized and will not grow. Vierka lager beer yeast is good (from Kraus). Bakers Yeast will work after a fashion, but it is best to avoid it.

There are quite a number of books available today on winemaking. My objection to most of these books is that they approach making wine as one would approach making a pot roast. There are really no recipes for making wine, only methods. These relatively simple methods, once mastered, will enable you to make any wine from apple to Zinfandel.

One of the best books available in this field is S. M. Tritton's Amateur Winemaking. Being a British book (the British are probably the world's greatest do-it-yourselfers), it deals mostly with fruit wines (fruit wines don't have to be syrupy sweet) since wine grapes are difficult to grow in England. But then it is difficult to obtain decent wine grapes in this country too (even in the California wine country).

Some of the methods described in this book sound quite technical, but once you understand them you will find them quite simple. And following them insures success.

Winemaking calls for some special equipment that usually isn't available locally. One of the best mail order suppliers (wide selection, low prices, fast service) is E. S. Kraus, P. O. Box 451, Nevada, Missouri 64772 (free catalog). Deliveries take a week to ten days.

A few winemaking tips that I would like to pass on...

***If you know someone with a fruit tree, you can probably get free fruit. Many times you can get really good buys on overripe fruit.

Many fruits make excellent wines and they can be adjusted to make either sweet or dry wines to suit your tastes.

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BNL:fg

***If you make wine by the gallon, the best jugs to use are empty one-gallon cough syrup bottles from the drug stores. (The pharmacist will usually save them for you if you ask him.) These are thicker than ordinary gallon jugs, and are made of colored glass.

***You can sometimes get slightly damaged but new and usable 50 gallon whiskey barrels from a U.S. bonded whiskey warehouse for \$5-10.

***Always use wine yeast—never bakers yeast (or your wine will taste like bread). The cheap, dry wine yeast is good (from Kraus).

If you are married or the head of a household, you can make up to 200 gallons of wine per year by applying for a permit (free) from the Internal Revenue Service (form 1541). If you're free and on your own, just don't let the feds bust you.

Lloyd Martin
San Jose, Calif.

Free Ordination

Universal Life Church
1766 Poland Street
Modesto, CA

Up Against the Wall Mothers

June was a hot time for the media this year. They attended all the graduations and reported all the helmets, gas masks, fists, fingers, and naughty speeches. Oddly enough the strongest and most widely reported gesture was that of a pretty senior at a high-rent girls' college who said she wasn't going to have any children. Mostly that's all they reported: she's pretty, she says she's not going to have children, what's this world coming to, nihilism? Quotes from the actual speech were sparse.

Here's the valedictory address of Stephanie Mills at Mills College on June 1st in full.

"Traditionally, commencement exercises are the occasion for fatuous comments on the future of the graduates present. This future is generally painted in glowing terms, characterized as long and happy. My depressing comment on that rosy future, that infinite future, is that it is a hoax. Our days as a race on this planet are, at this moment, numbered, and the reason for our finite, unrosy future is that we are breeding ourselves out of existence. Within the next ten years, we will witness widespread famines, and possible global plagues raging through famine-weakened populations. Soon we may have to ask ourselves grisly questions like, 'Will I be willing to shoot my neighbor if he tries to steal my last loaf of bread? Will I be forced to become a cannibal?'"

"The hideous fact that we are reproducing so rapidly that it is conceivable that our means of sustenance will be grossly inadequate within ten years was foreseen nearly two centuries ago. In 1798, Thomas Robert Malthus, in his 'Essay on the Principle of Population,' said, 'Population, when unchecked, increases in a geometrical ratio. Subsistence increases only in an arithmetical ratio.' We have had nearly two hundred years to think over the consequences of that projection, yet at the turn of the century, people were arrested in New York for distributing birth control information, and only last year, Pope Paul the Sixth issued an encyclical which forbade the members of his flock to use contraceptives. At this point in our history as a race, Dr. Paul Ehrlich of Stanford has observed, 'Anyone...who stands in the way of measures to bring down the birth rate is automatically working for a rise in the death rate.'"

"So—we have had at least a two hundred year's warning, yet in nineteen sixty-nine, still, virtually nothing is being done by anyone with enough power to substantially affect the situation. Mind you, I said affect, not eliminate. One of the more depressing aspects of the problem is that the action must be taken simply to minimize the consequences. And if this action is taken, which it probably won't be, the psychological damage that we will all suffer is great. One of the suggestions for reducing the range of the disaster is the involuntary sterilization of any person who has produced more than two children. This may sound grossly inhumane, and perhaps it is to an extent, since our identities as men and women are so conditioned by our reproductive functions. I am terribly saddened by the fact that the most humane thing for me to do is to have no children at all. But the piper is finally demanding payment.

"As an ex-potential parent, I have asked myself what kind of world my children would grow up in. And the answer was, 'Not very pretty, not very clean. Sad, in fact.' Because, you see, if the population continues to grow, the facilities to accommodate that population must grow, too. Thus we have more highways and fewer trees, more electricity and fewer undammed rivers, more cities and less clean air. Mankind has spread across the face of the earth like a great unthinking, unfeeling cancer. We have horribly disfigured this planet, ungrateful and shortsighted animals that we are. Our frontier spirit involves no reverence for any forms of life other than our own, and now we are even threatening ourselves with the ultimate disrespect of suicide. Perhaps we are unconsciously expiating our guilt, but it is just this quality—unconsciousness—that we must fight in ourselves. Rather than blindly walking into the abyss, we must take warning and try to extricate ourselves from it before it is really too late.

"Too often, members of the so-called real world, that is the non-academic world, by some people's definition, are willing to dismiss the warnings and insights of the unreal, academic world. This often made distinction and subsequent dismissal is a result of practicing a peculiar brand of pragmatism. It is the kind of pragmatism which says, 'Let's be realistic—it just isn't profitable to develop an electric automobile.' This kind of pragmatism is false, nearsighted, and a very shallow form of self-delusion. One of the advantages of a college education is escaping this kind of pragmatism for four years, being free of the small reality of earning a living. From this freedom comes a long-range perspective, which is a desperate necessity—not a luxury.

Colleges are hot-beds of this kind of necessity. For four years I have been spared the reality of car payments and refrigerators, and in these four years, I have had more and more to come to grips with the awesome reality of human survival on this planet. Coping with this reality has not been a privilege, and certainly not a luxury. It is a very disheartening responsibility.

"One of the reasons that it is so disheartening is the knowledge that it would be easier for me to leave this ivory tower to earn a living as a cocktail waitress than to earn a living as a crusader, of sorts, for human survival. If I had enough time, I'd try to get rich, become a philanthropist, and endow a foundation. But I have less than ten years, and so for that matter, do you. This business of impending extinction is something that the so-called real and unreal worlds share. I can't eat a dollar bill, and Howard Hughes can't eat my diploma. The real and unreal worlds both have to become pragmatic on a grand scale, or there won't be any worlds left. We must come together to face this overwhelming human reality, and to do so, we probably must circumvent the so-called political realities which limit our ability to move quickly to lessen the gravity of this disaster. Political realities are, after all, only constructs for dealing with situations, and as mental constructs, they assume a note of unreality—especially when they obscure reality. Political realities are clouding this issue of human survival every day. On the primary level, there is the political reality that we simply can't go into a country and force it at gunpoint to adopt population-control measures. Still, we go into countries and increase their death rates at gunpoint. On a secondary level, there is the political reality that this situation is far less interesting to our government than the space program, anti-ballistic missiles, or even the size of print on cigarette packages. This conspicuous lack of interest may be due to the fact that pushing to save the human race will turn no one in instant profit. There is no material or political gain in the issue as of this moment.

"And, as of this moment, the problem seems vaguely unreal. Some of us have never gone hungry a day in our lives. Starvation is a remote concept. The shelves of grocery stores are still crammed with things to eat. Why should I believe that anything will happen to change that? You and I should believe that the famine can and will happen if for no other reason than that we still may be able to do something. And doing something to save the human race has always been a fond dream of idealists both over and under thirty."

Radical Theatre

From Booklet:
Radical Theatre Festival

1969; 48 pp.
\$1.50
San Francisco Mime Troupe
450 Alabama St.
San Francisco, CA 94110



R. G. Davis

Americans are so fucking hip. Middle class kids understand everything quick, but nothing below that. The hip generation (and I'm part of it), everybody understands, like, dig that! Absolutely! Yeah! But ask them about what's really going on underneath and they have no knowledge. Everybody's so freaking television hip, so fast, that they're impatient with Schumann's time, which is absolutely necessary. Because sometime or other, you have to sit down and say where you are. And I don't mean Zen, and I don't mean Buddhism, and I don't necessarily mean religion. Maybe religion is the only place where you can stop and think, but sooner or later everybody has to do that.

One problem about your stuff when it goes into the theater and commercial critics look at it is that they can't understand it because their eyes and their ears are in tune to bang, bang, bang. And they can't stop. Even the guys from the Village Voice. The complaint is that your time is too long. Your time is too long indoors, because they are used to superficial time. It should be imperative that your shows not be done in a theater, because it's anti-theater. It's sort of hard to be anti-theater in a theater. It becomes sort of pretentious, avant-garde—and you're not avant-garde. In a gym, like last night, it seemed to be appropriate. It was essential that it be there. You create the space.

I think at this point, the radical theaters are required to do what they have to do in a magnificent and significant way, creating that alternative and telling the politics it's not enough to protest and show the contradictions of the society. I think everybody knows that. They don't know what you do as an alternative. We all know Teatro exists, the Mime Troupe exists and Bread and Puppet exists. So when someone says, "Where, what theater do I go to?" you can say, go to one of these three or create your own. That's an alternative. Rather than saying, "Broadway is shit, off-Broadway is shit, academic is shit. We all know it's shit, but I work in it anyway and I get my \$185 a week and I'm joining Equity. I'll be in Hollywood next year." Garbage.

If you do a show in the park, you're immediately into people. You can get magnificent reviews in the London Times or in New York and when you go to the Mission district and say, "Here we are with the show," they say "Let's see it." Period. As long as you keep that reality in front of you, you're always relating to the movement.



Luis Valdez

All of a sudden, you see with clarity, and you say, you don't need all that shit! You don't need a hundred thousand dollars to start a theater group. You can do it with nothing, nothing. Do a play about naked people. That's it. The theater is in you. It's your soul, it's your heart, it's the constant reaffirmation of what life is all about.

Who responds to Tennessee Williams or Arthur Miller picking his liver apart? You can't respond to that shit. The Mime Troupe is outside, in the park. They're out, they're alive. They draw your attention in spite of all those urban distractions—pedestrians, traffic, etc. They say "fuck the distractions, I've got something to say and you pay attention to it because it's said well."

So we found that we had to back away from Delano, sixty miles at least, to be a theater. That was a very hard decision to make—very, very hard. Do you serve the movement by being just kind of half-assed, getting together whenever there's a chance, hitting and missing, or do you really hone your theater down into an effective weapon? Is it possible to make it an effective weapon without being blood-close to the movement? That's the question that was on our minds and what we took on when we moved sixty miles to Del Rey.

We never blame the audience.

E.A.T.

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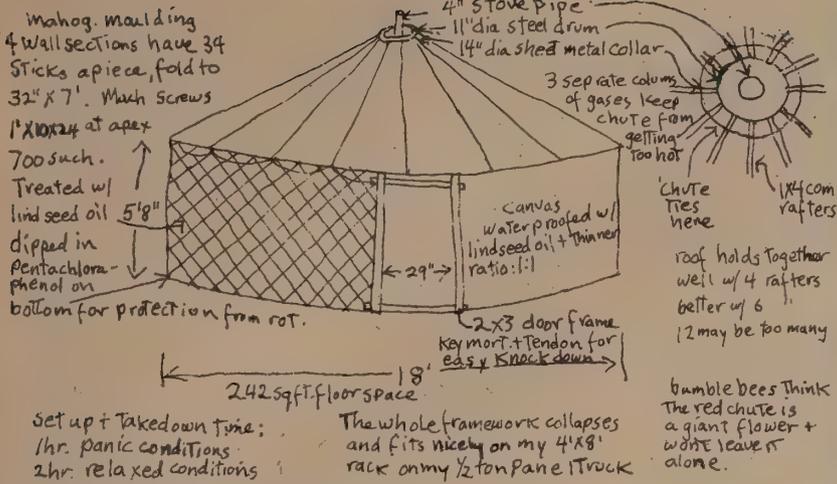
BY NIELS O. YOUNG

ABSTRACT

By moving along itself, a cord or line-mass which is limp when at rest will form a steady-state space curve under steady external forces. A loop of moving cord forms a closed space curve which can support compressive loads and is a new engineering element. For example, a loop of 0.25 cm diameter nylon cord driven along itself at 35 meter sec⁻¹ was erected against gravity into a stable configuration 30 meters high. Some of the ballistic and aerodynamic properties of these standing loops are explored.



Yurt



Earth Images

Nice big 18" x 24" color reproductions of Apollo 8 photos of the Earth and Moon. Set of four for \$3.25 postpaid. A buy.

from: Lunar Graphics 4626 Van Nuys Blvd. Sherman Oaks, CA 91403



Idea sparked by photo Nat. Geog. Nov. 1942

Does anyone know how to waterproof a nylon parachute?

Here's a note on a personal breakthrough in low-cost nomadic dwelling. I have just built a mongolian yurt with modern materials in 3 weeks for under \$100.00 w/ the help good credit and patience of my family. Parachute roof (24" dia.) \$20.; canvas 2nds 43' x 8' \$18.; 12- 1" x 4" common for rafters \$6.; nuts, bolts, & fasteners \$12.; 1 5/8" beveled mahog door molding—a lucky score free in hardwood scrap box. I used 140 7' lengths of molding. Polyethylene 6 mil. sheeting as windows bet. canvas sections \$5. I will send more construction details & costs & photos for Supplement if you like. I'm selling nothing only promoting idea & exper. for domestic econ.

Ron

Blackwells Books, England

Blackwell's Bookstore in Oxford, England, is a service which the Catalog should list. Their collection is probably the world's most comprehensive and they run a global service, providing lengthy, free, separate catalogs on about 25 subject areas, including children's books, books in other languages, science, literature, philosophy, religion, mathematics, etc. Their prices are significantly lower and they will not send a book which can be obtained more cheaply in America unless you so request. They will open an account for you, accept your personal check, and bill you semi-annually. They also buy up old libraries (occasionally famous ones, recently John Masefield's) and issue catalogs on second-hand books and first editions. They have a cable code OXFAM and a code system which enables you to place an order with a minimum of cost in a hurry. The books arrive slowly but the catalogs keep coming in all year long and are a great delight themselves. Larry Schwartz Petaluma, Calif.

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Wild West

The Wild West Festival to occupy approximately the entire Golden Gate Park in San Francisco with music and people and doings—mostly free—is scheduled for Aug. 22, 23, 24. Whole Earth Truck Store will be there.

For information, participation, etc. write:

The Wild West Festival
3044 Pine St.
San Francisco, CA
phone (415) 922-3800

To the Gentle Folk:

Why hasn't anyone thought about providing information for obtaining children's literature...at discount prices...? Many beautiful things happening there. On the current scene are the gems of Roald Dahl, James and the Giant Peach, Charlie and the Chocolate Factory, The Magic Finger, J.R.R. Tolkien thing of evanescent beauty, Smith of Wootton Major, Hilary Knight's labors of love and beauty, Where's Wallace?, his illustrations for Beauty and the Beast, and alphabet book. Our daughter's favorites for escape and adventures include such perennial delights as Winnie the Pooh, Golden Treasury of Poems, edited by Untermyer and illustrated by Anglund, Down-A-Down-Derry, Walter de la Mare poetry illustrated by Dorothy P. Lathrop (So, did you ever read Lucy Went A-Walking?), Rainbow Gold, a book of poetry edited by Sara Teasdale and illustrated by Dugald Walker, The Ship That Sailed to Mars, a marvelous fantasy written by (?) and The World of Oz. Of course, there are such esoteric gems as Monkey, a classic Chinese tale which has thus far been best translated by Arthur Waley (a child's edition in English has not appeared yet, to the best of my knowledge) and Flowers in the Mirror, by Li Ju Chen (have you heard of the "blooming of a hundred thousand flowers"...?).

For the "Stump Farmers of America" who have jaded appetites, I herewith enclose the card of Chong Imports in San Francisco (the store's name in Cantonese is more like Chiang Kee Jah On). Therein one can obtain such condiments as Plum Sauce, the different types of Soy Sauce and Oyster Sauce, black wine vinegar, and spices such as Sesame seeds, anise seeds, chinese mustard (dried) and a variety of dried mushrooms, shrimp, pickled salty and/or hot spicy mustard and radish. They stock goodies like shark fin and birds nest. But they are the best source for oriental housewife's everyday kitchen goodies. Besides that, they have a variety of herb teas, musical instruments, (reeds for Shinn-Nai), calligraphy necessities, pots and pans, and some trash too among the treasures. The most important thing about this Chinese General Store is that they stock and sell chinese vegetable seeds. Please don't insist upon buying a chinese gardening book translated into english because the man will probably tell you what he said to me, "If you plant it in the ground and take care of it; it will grow if it will grow. That's all..." Plant winter melons, (they are as big as watermelons when matured; use for soup or sautee with dried shrimp and salt to taste, or stick a chicken—whole and fresh and clean—into the cavity of the melon after removing the seeds from narrow end of melon, add goodies like mushrooms, bamboo shoots, water chestnut, diced ham, and peas...put back top of melon after seasoning to taste and cook the whole damn melon in a water bath...say don't take the rind off the melon when you do this...cook over your wood stove or whatever for half a day, or when chicken is cooked and fall off bones ...), Tse Chwa (delightful squash—trim off hard ridge of rind only, before cooking) Snow Peas, White Radish (daikon in Japanese and law-bok in Cantonese), Chinese Chard (known as Bok Choy—which is sweeter than Swiss Chard), Chinese Mustard (try to pickle these), Chinese Broccoli (known as Gai Lon Choy by Chinatown indigents, and Chinese parsley (Coriander) for starter.

Love and Peace,

Lai Ching
麗晶

Chong Imports
838 Grant Avenue
San Francisco, CA
(415) YU 2-1432

Farmers of Forty Centuries

According to the publisher this classic is now going out of print. We have the last nine (correction, eight, Joe Bonner just bought one for Lama) copies in Menlo Park. If you can't get a copy and can't re-publish it yourself, address your beef to:

Hillary House Publishing, Ltd.
303 Park Avenue South
New York, N. Y. 10010



BMW Motorcycle

BMW motorcycles—I thought of this last time but didn't think that you'd be listing such. However, seeing as you have indirectly listed Volkswagons (VW Tech. Manual) and Airstream Trailers, I will suggest. As far as quality there is not another vehicle on the road that can touch them. Mine is 10 years old and has 143,000 miles on it. Last year I loaded it up with 430 pounds of people, camping gear and luggage and drove to Maine and then went 50 miles into the wilderness. I figure she's good for another 10/143,000. They are a bit expensive but worth every penny. If you're going to go Nomadic, on or off the road, you might as well go all the way. It's the only way to travel. Western Distributor is Flander Co., 200 West Walnut St., Pasadena, CA 91103. Eastern Distributor & sole importer is Butler & Smith, 160 West 83 St., N. Y., N. Y. 10024.

Larry Kafka
Brooklyn, N. Y.



Planet

The current Planet (July 1) has some excellent excerpts from Vonnegut's Slaughterhouse Five and Charles Bukowski and a dandy read-aloud story complete. It's earning its 25¢/issue, \$5/year (bi-weekly). What I like is that I can't tell what Planet is going to say or quote next, but experience so far makes me want to find out.

Planet
c/o The Garrett Press
746 Brannan St.
San Francisco, CA 94103

the other night some kid told me (he was sitting in the center of the rug looking very spiritual and beautiful):

"I'm going to shut off all the sewers. the whole city will be floating in turds!"

why, the kid had already told me enough shit to bury the whole city of L.A. and halfway up into Pasadena.

then he said, "got another beer, Bukowski?" his whore crossed her legs high and showed me a flash of pink panty so I got up and got the kid a beer.

revolution sounds very romantic, you know. but it ain't. it's blood and guts and madness; it's little kids killed who get in the way, it's little kids who don't understand what the fuck is going on. it's your whore, your wife ripped in the belly with a bayonet and then raped in the ass while you watch. it's men torturing men who used to laugh at Mickey Mouse cartoons. before you go into the thing, decide where the spirit is and where the spirit will be when it is over. I don't go with Dos—CRIME AND PUNISHMENT—that no man has a right to take another man's life. but it might take a bit of thinking first. of course, the gall is that they have been taking our lives without firing a bullet. . . .

Overland Guide To Nepal

An overland trip East can be a beautiful experience, but a lot of work as well. Here I attempt to give you a factual outline to make this experience even more pleasant and less confusing than it was for me.

WHEN TO GO

Firstly, it is well to start the trip in late summer from Europe: August, September and October as starting dates will give you the advantage of the best possible weather all the way to Nepal; arriving Nepal circa xmass. NOTE: The weather along the route I outline is mild from August to xmass. Eastern Turkey is cold at night in the mountains. It can be cold with light snow crossing the mountain ridge out of Ghazni just before dropping into Kabul, Afghanistan. It would be impossible to cross the Hindu Kush after November and difficult to get to the ruins of Bamiyan, north of Kabul. Shrinagar, the city of houseboats in Kashmir will be very cold and possibly snowbound late November. Kathmandu valley is mild year round with a couple of weeks of freezing weather in January.

HEALTH

It is of utmost importance to keep in good health. First, a smallpox and cholera vaccination are mandatory as you will not be allowed to cross frontiers without a World Health Certificate. A large supply of multiple vitamins is strongly recommended. Your diet will lack in vitamin C. Also Intro-vioform are some help against diarrhea and dysentery. If you become seriously ill go to U.S. Consulate and a reliable doctor will be recommended. NOTE: At U.S. Embassy in New Delhi there is a clinic in the main building, and they will treat you without question.

CLOTHING

Of course, you are going to travel light. Itemizing everything isn't necessary, but it should be noted that you will need a dark sweater and windbreaker. That everyday stuff you wear, take one spare. I dye my underwear dark colors; white will never be white again and there is nothing which looks worse than dirty drawers when stripping down in front of a room full of fellow travelers.

Same goes for the girls, and pants are quite acceptable for the girls. One dress and a few tops are all that is necessary. GIRLS: Mini skirts only attract remarks and trouble. You can visit holy places in pants, but dresses higher than just above the ankle will bar you from many mosques.

PAPERS

Bartholomew maps are the best, but you can get shell and local tourist maps along the way. Take all the credentials you can get. International Student Card, \$3 from Nat. Student Association, 265 Madison Ave., N.Y. A youth hostel can be obtained at any hostel in Europe and cost less than here if you tell them you want one only for foreign travel and void in U.S. hostels. A PRESS card. Try having an official looking I.D. laminated with PRESS stamped in large red letters across the whole face.

MONEY

Take some cash and save it for the Eastern money market. Some travelers checks are good for the time spent in Europe and stable currency countries. Money is unstable in: Pakistan, India and Nepal. My summation will give you an idea of expense.

GETTING TO EUROPE

Cheapest way is Icelandic Airlines: \$167.50 thrift season one way to N.Y. to Luxembourg. So called work aways and other fantastic stories of cheap boats don't exist except for 1% of total travelers hunting for these bargains.

You've arrived in Luxembourg or some seaport, take my advice and start immediately for the East. Even if you have never been to Europe before save your cash for the East. If you are hitching, or driving get on the Autobahn for Munich. Now that you are on the road there are a couple of essential items for all travelers: an air mattress and a good sleeping bag. There are two things about the overland trip to Nepal which are very important: good food and good sleep. You can make the whole trip sleeping on hard floors and eating rice, but once your body resistance falls there are a number of maladies awaiting entrance to your system. An Army type poncho is also a very handy item, and a small one-burner gasoline cook stove should be seriously considered.

MUNICH

Choices for Hitch-hikers:

1. Europa bus direct to Teheran for \$75 plus overnight hotel expense. A ten day trip.

2. Train direct to Istanbul, \$45, a two day ride. Be sure to take food on train.

3. Hitch-hike on to Istanbul, three to ten days. Do not try to hitch the Dalmatian Coast. Route: Munich to Salzburg, Klagenfurt, Ljubljana, Beograd, Skopje and from Skopje through Bulgaria to Istanbul, or to Thessalonika and on to Istanbul. I prefer through Greece. DRIVERS: If you're not in a hurry you would do well to consider driving down the Dalmatian Coast. There are many campsites and late September or early October will still be sunny days. The route from Dubrovnik goes to Titograd, then Kolasin. Careful not to miss the turn off into the city of Kolasin and out the opposite side of town runs an unbelievably potholed dirt road. This will be the worst road of the entire trip to Nepal. It is very bad to Pec, then you continue to Prizren, and you can depend on a modern new campsite in Prizrin, then Skopje and the main road. From Skopje you can go either through Bulgaria or on to Thessalonika, Greece. In Thessalonika is a very modern campsite with free hot water showers and a private beach. The camp is actually 25 ks out of the city and signposted by International camp signs. NOTE: All travelers who plan on transiting Bulgaria will have to pay \$4 for a visa at crossing point. The train transits Bulgaria so be sure and get a Bulgarian visa at a Bulgarian Consulate before starting out. Visa costs \$2 at Consulate.

TURKEY

Arriving from Greece, there is a campsite at border crossing in Ipsala. These modern campsites in Turkey are located at BP gasoline stations and called BP Mocamps. Arriving from Bulgaria there is a BP Mocamp at crossing town of Edirne.

ISTANBUL: BP Mocamp is on your right 8 ks before city and near airport. It is the main road leading into Istanbul so you can't miss it. This camp has a swimming pool as well as free hot water showers and free GAZ cook stoves. Cost varies depending on size of car and tent.

My wife and I, motorcycle and small tent ran \$1.25 per day. For those arriving by public transport or hitching without tents, cheap hotels are located around the train station and the Blue Mosque. A room for two will cost from 5 to 10 lira per person per night. You may change money at the banks for an official 12 lira to \$1. NOTE: if you are going to buy a ticket on an international carrier then you must change your money at the rate of 9 lira to \$1 and produce receipts. Get your visa for Iran; U.S. passports: no charge. For those who elect to follow route to Trabzon, you can get a visa for Iran in Trabzon and avoid the huzzle of Istanbul.

If you are continuing by automobile the direct route is Ankara, Kayseri, Sivas, Erzincan, Erzurum, then Mako, Iran. After Ankara the roads are for the most part loose gravel to the Iranian border. NOTE: Watch out for six inch deep pot holes in surfaced road 20 or 30 miles before border.

HITCHERS: You have several choices.

1. Take boat from Istanbul to Trabzon, \$4 with student discount, two nights without food. If any are on motorcycles freight is \$2 and well worth missing the uninteresting drive over bad roads through central Turkey. The ship, EGE, leaves once a week on Tuesday and the office for the company is Denizcilik Bankasi located to your right just after crossing the Galata Bridge from old to new Istanbul. For student discounts you must get a Turkish student card obtainable from any of the many student organizations in Istanbul: cost \$1. NOTE: if you are over 26 you might be refused student discount, but argue.

2. Train from Istanbul to Erzurum \$6.50 with stu. dis., and that is a very nice second class.

3. TBT bus from Istanbul direct to Teheran \$30, a four day trip with nightly stops in hotels. Expect to spend about \$1.50 per day for food and lodging. Bus driver will not allow you to sleep on bus.

TRABZON: There are several mini bus companies which will take you to Erzurum.

ERZURUM: One connects here with either a Mihan Tour or TBT bus to Teheran for \$12. One can camp at the BP station.

NOTE: Where student prices quoted non students figure 30% more. If student rate not quoted then rate is fixed to all.

IRAN

You can expect to find only two more campgrounds from here on; one in Tabriz and one in Teheran. Otherwise those traveling by car can pull off the road most anywhere to overnight camp. The camp in Tabriz is signposted and easy to locate. The one in Teheran is about 10 ks out of town on the road to Saveh. It is on your right and called Camp del Sol. Cheap hotels are located in Teheran around the train station ranging from 30 to 50 rials per person per night. \$1 equals 75 rials. Rials are also spoken of as Tummin. One Tummin equals 10 rials.

TEHERAN: Get your visa for Afganistan; U.S. Passports, no charge. Afganistan consulate is currently asking the rougher looking travelers to show their money, but one can pass around one person's roll. For those of you who might need a good Western type meal you can get an excellent lunch for 150 rials at Sandys Restaurant located next door to the American Express office on Takht-e-jamshid street. From Teheran the route is north to Sari and on to Meshad. This road is bad, dirt and washboard, from Shah-pasand to Meshad. For those going public transport there are both trains and buses running to Meshad. By bus it takes between twenty and thirty hours and prices vary from 150 to 400 rials. Be careful of overcharging and short changing in Iran. Gas pumps do not ring up the price. Find out the price by liter and figure up bill yourself. Price is standard as gasoline is state controlled. Iranian numbers to ten are:

1 2 3 4 5 6 7 8 9 10
۱ ۲ ۳ ۴ ۵ ۶ ۷ ۸ ۹ ۱۰

MESHAD: Cheap hotels run 30 to 50 rials. There are transit beds in bus stations but they cost as much as a place downtown. Twice a week a bus runs from Meshad to Herat, Afganistan. If you don't want to wait for that connection you can take a bus daily to the border town of Taiebat, Iran; 75 rials. From Taiebat you can hitch a ride with a tanker truck to Herat; you'll be expected to pay truck driver. If the taxi from Herat happens to be in town it will cost, after bartering, 200 Afganies per person. (75 Afs to \$1.)

DRIVERS: You will leave Meshad on the road to Torbat-heydriyeh and go on this road, 38 kilometers and on your left will be a dirt road leading down into a dry river bed with an old washed out bridge. That is the road to Afganistan and til now there is no sign post. This road is badly washboard for 190 kilometers to Taiebat.

HIKERS: If stuck in Taiebat you can sleep in tea house across street from customs house for one Tummin. Keep in mind that you can sleep in most roadside tea houses.

AFGHANISTAN

From Herat you get a bus direct to Kabul with an overnight stop in Kandahar. You may break your journey in Kandahar if you wish. The price varies from 215 to 300 Afganies Herat to Kabul. Bus leaves daily. Hotels in Afganistan will run from 30 to 50 afs. per person per night. If you want to buy skins Herat is actually the best we saw. Afgan coats are running between \$10 and \$30.

KABUL: The bus will let you off in front of the Khyber restaurant. This is where most travelers first come and you can meet other people coming from the East and exchange information. In Kabul is the money bazaar. Here you will get 40% more for your money than the official rates of India and Pakistan. This is all illegal and you should check with current travelers as to what's going on. You can expect about 12 Indian rupees to \$1 (Official rate 7,40) and 8.50 Pakistan rupees to \$1. (Official rate 4.75). Get your Indian and Pakistan visas; no charge to U.S. passports. NOTE: No matter how you travel through Pakistan you will need a road permit. The two best cheap hotels are Sakhi, and Bamiyan. A bus runs daily to the Pakistan city of Peshawar for \$2.

PAKISTAN

In Peshawar the youth hostel is very good and costs 1.50 rupees. It is located on your left at the University on the main road coming into Peshawar from Afganistan. Trains run regularly to Lahore. Interclass is \$2. Side note: you can fly from Peshawar to Gilgit and then trek to Hunza. Flight cost \$6.

LAHORE: There is a youth hostel on Ferozepore road. A bus runs daily to the Indian border. Save 1.75 rupees for bus fare.

INDIA

After crossing the frontier you take a tonga, a horse drawn cart, to Ferozepore. Don't take a bicycle as the ride is 12 ks. Train to New Delhi costs \$1.50. The best way to get around India is by train. Now your student card will come in handy as students get 50% reductions and no age limits. The best class for long journeys is third class two tier sleeper. To get the reduction you go to the main administration building in major cities. For example, in New Delhi you go to the office of the Northern Railroad and tell them where you want to go and they check your student card and give you an authorization for reduction which you then take back to the railway ticket office and present it to the window of the line you wish to buy a ticket on. He will then sell you a ticket. Tickets should be reserved for a week in advance, but if you find the train sold out, then apply for a special tourist quota. For this you return to the administration building for the authorization, and most times these buildings are several kilometers apart. In other words affairs in Indian are complicated with forms and papers to fill out, but this is part of a rich experience. NOTE: Mail trains are faster than express trains.

NEW DELHI: Hotels in the center of town will run about 7 to 10 rupees per person per night. There is a 1 rupee youth hostel, but it is very difficult to find and out of two several ks. If you are approaching New Delhi by car keep asking directions to Connaught Place; the center of town. Indian meals will run 1 to 2 rupees and the best thing on the menu at Wengers restaurant, Connaught Place is 6 rupees. Wengers is a place to meet other travelers and get excellent Western meals while your tummy is getting used to Indian fare. Don't shy away from expensive restaurant hotels in India. You can usually get a full lunch and eat as much as you like for 7 to 10 rupees and you need to keep body fit on this kind of trip. We would stop at one of these luxury places once a week to rebuild our bodies with the comforts of hot water in the toilets, etc. For those travelling by car there are DAK bungalows or PWD Inspection houses scattered all over India. These cost 1 to 3 rupees a night per person, and some per room no matter how many people are in it. Get your Nepalese visa in New Delhi.

NOTE: Way out hip types are being refused visas to several Eastern countries. That doesn't mean one can't have long hair and a beard, but if it is shoulder length and you are barefoot wearing robes you might be mistaken as a hippy.

Take the train to Raxual, the border town before Nepal. There is a government rest house there for 1.50 rupees. Begin the trip to Kathmandu early in the morning as it is a ten to twelve hour trip by truck. DRIVERS: Leave early and fill up all gas cans in India as gasoline is double priced in Kathmandu.

NEPAL

There are several hotels which are cheap. Prices vary from sleeping on the floor for 15¢ to 30¢ a night to a nice double room and patio at the Camp Hotel for \$1.25 for two. Currently the blue Tibetan restaurant and Camp hotel are hangouts for travelers. However, there are many fine little hotels and the valley is not difficult to get around in. Bicycles are renting for about 75¢ a day.

SUMMATION

Public transport cost from Europe to Nepal and back circa \$200. The whole trip with food and lodging should realistically cost you about \$400 to \$500 Europe-Nepal-Europe. Many people do it for less, but my cost estimate is based on good food and good sleep; your only health insurance in the East, Remember Europe is the expensive place.

MAIL DROPS

These are the best for a variety of reasons which six years of travel have dictated to me:

Istanbul:	Post Ristante
Kabul:	Post Ristante
Kathmandu:	Post Ristante
Teheran:	American Consulate
New Delhi:	American Express

NOTE: American Express charges \$2 for forwarding mail. American Consulate forwards promptly free. Post Ristante is slow to forward. Having money sent to India should be avoided, but if you need this service have your U.S. contact go to American Express office and get a demand for money which will be forwarded to American Express in Bombay or New Delhi. In any case you will not be allowed to receive foreign cash.

Liquor permits are given to tourist by the tourist office and can be illegally sold. Check with travelers as to where and going price.

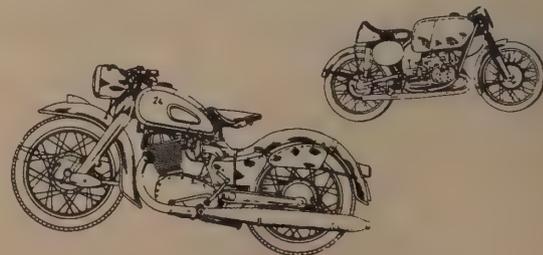
No insurance is required from Turkey onwards so don't bother to get any for your vehicle. A Carnet De Passage is the easiest way to cross borders with a car. Automobile club can assist you in getting one. Not necessary for a motorcycle as you can have it entered on your passport when crossing all the borders. India, however, requires a letter from the Consulate as to your promise to re-export machine from India. Currently the U.S. Consulate in Kabul is issuing such letters, which you then take to the India Consulate in Kabul for an authorization to cross the border with the cycle.

A good all purpose guide is: Golden Guide to Southeast Asia.

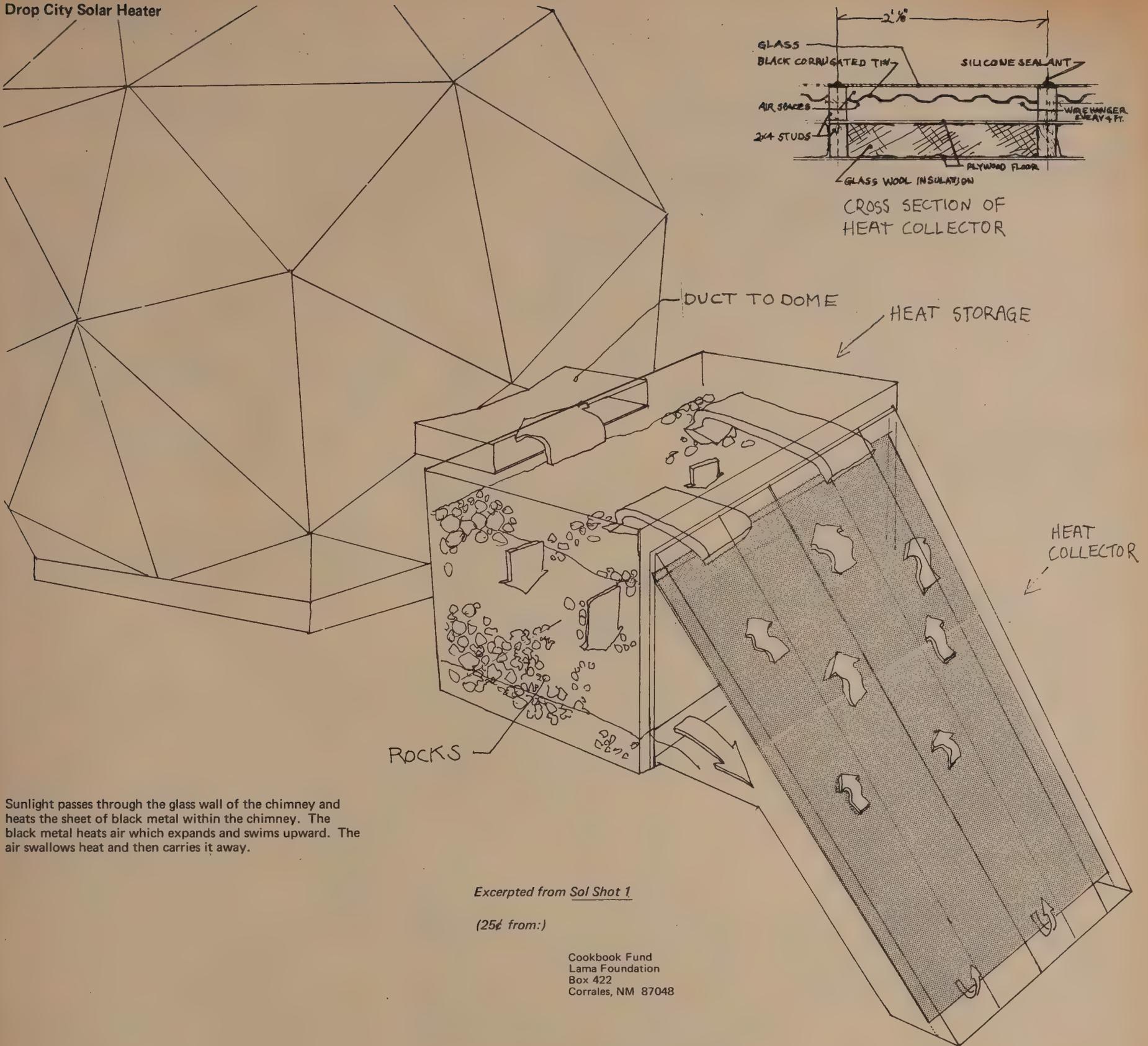
Do not be sold on buying a dozen or more visa photos in U.S. at high cost. Cheap photos are available along the way. You can use 2 doz. small two inch photos.

My gasoline expense from London to Nepal was \$65. Driving a BMW R60.

Sid Sheehy
London, England



Drop City Solar Heater



Sunlight passes through the glass wall of the chimney and heats the sheet of black metal within the chimney. The black metal heats air which expands and swims upward. The air swallows heat and then carries it away.

Excerpted from *Sol Shot 1*

(25¢ from:)

Cookbook Fund
Lama Foundation
Box 422
Corrales, NM 87048

Stack Sacks

Between adobe bricks and formed concrete walls is this other way. You take gunny sack halves, sew them into narrow bags, fill them with sand and some concrete, stack the dry bags up like bricks, pound re-bar down through the bags, frame doorways and such with re-bar, then wet the whole wall with a hose or a rainstorm, let cure, put on the roof (maybe with wet-concrete-dipped gunny sacks for shingles). Trowel on wet concrete for a smooth wall if you want it.

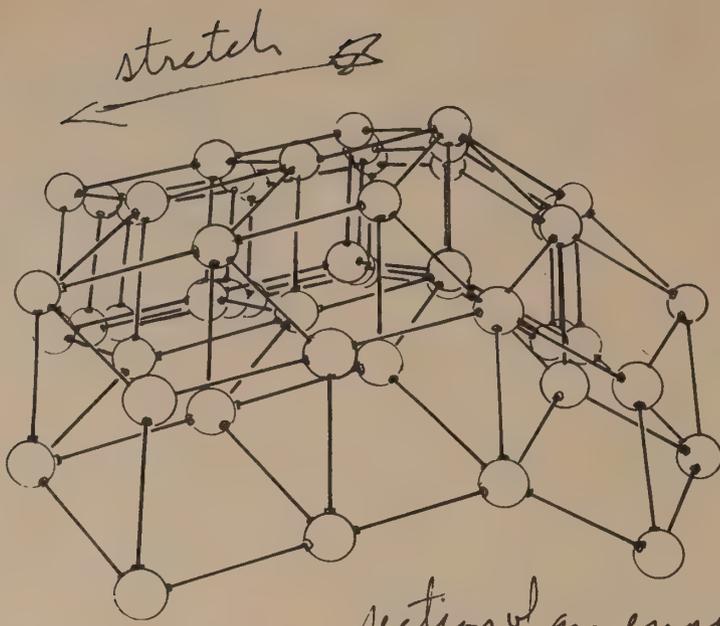
According to Holly Baer, who told us, the main source of information is

Dicker Stack Sack International
2600 Fairmont Street
Dallas, Texas 75201

They are getting a patent on the device that turns out filled bags. Apparently local franchises can deliver an order of stack sacks to your door. Some people dip them in water, then place them wet.



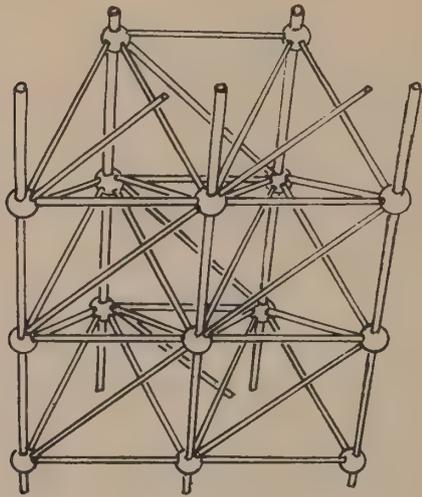
Ten Zone Truss



section of an ennea.

stretched through one zone

Space grids are triangulated systems of members and joints used to conduct rigidity through space. You see space grids in large roofs of supermarkets, warehouses and auditoriums. A space grid is successful if it is cheap, strong and beautiful. There are many similarities between crystal structures and space grids. The regularity of the crystal provides a guide for the space grid designer—if he adheres to it he is rewarded with the simplicity of few different kinds of joints and connecting members.



Regular space grids—that is a space grid where we have uniformity in our joints and our edge lengths are usually confined to the simplest sorts of structures—flat roofs. The more imaginative uses of the regular space grid in the past have included Fuller's use of the octet truss for a servicing dock for the B-36 bomber and the space frame exhibitions structures for Expo '67 Montreal—in these cases the space grids were allowed to turn corners and form shapes in accordance with the symmetries of their joints.

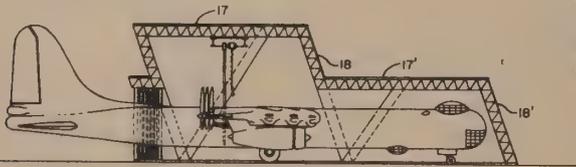


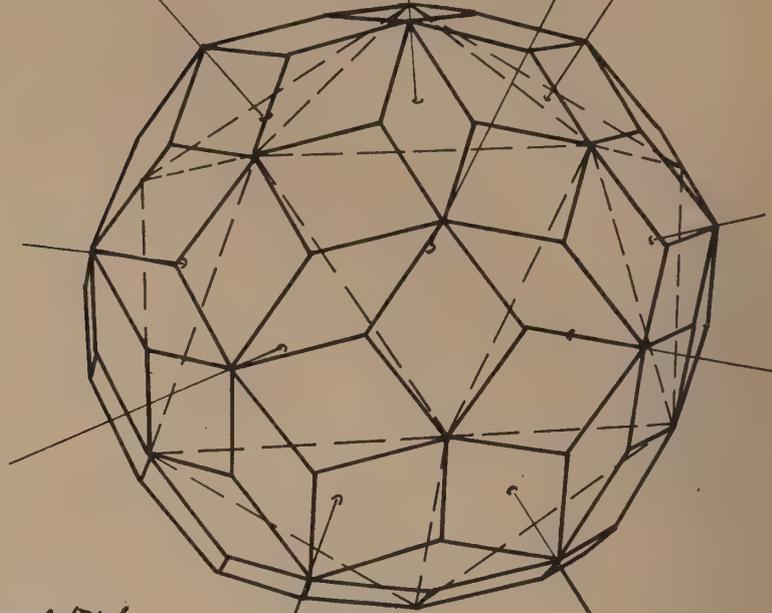
FIG. 3

Plate 73
Project by Richard Buckminster Fuller. A roof, wall and/or floor framework consisting of a truss in which the main structural elements, struts or triangular sheet members, form equilateral triangles interconnected in a pattern consisting of octahedrons and tetrahedrons, with the major axes of all octahedrons parallel throughout the octetruas framework.

We have been working with a space grid that seems unique in its simplicity and the multitude of forms that come naturally from its geometry...This is the ten zone truss with icosohedral hubs.

The decazone truss can produce $C_{10}^2 = \frac{10 \times 9}{2 \times 1}$ faces in 45 different planes. This is a much richer variety of planes to choose from than that found in most trussing systems.

The enneacontahedron is the zonahedron associated with the star formed by joining the midpoints of opposite triangular faces of the icosohedron.



The edges in an enneacontahedron are parallel to the lines of the star. This is by definition their relationship. The edges are in bands, sawtooth bands of diamonds, fat diamond, fat diamond, skinny diamond, fat diamond, fat diamond, skinny diamond, etc., which girdle the figure.

Each plane can grow in two directions by the addition of more diamonds, and any plane if extended until it becomes weak can be reinforced by the addition of another layer above or below itself in the form of a truss. With 45 different planes to choose from the variety of shapes that can be made is huge. If some form is structurally unsound it can be reinforced by the addition of a truss.

I feel the reason you do not find discussions of it along with the other more common space grids is the icosohedron's foreignness to the world of crystallography—the study of the arrangement of atoms in crystals. The icosohedron has five-fold symmetry and, therefore, the icosohedral group cannot appear in the usual crystallographic studies since they cannot include 5 fold axis. To make this most clear try and cover a plane with close packed pentagons—it won't work.

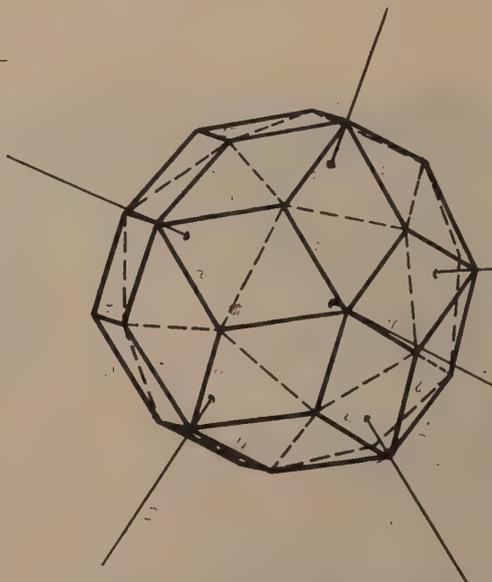
unavoidable gaps



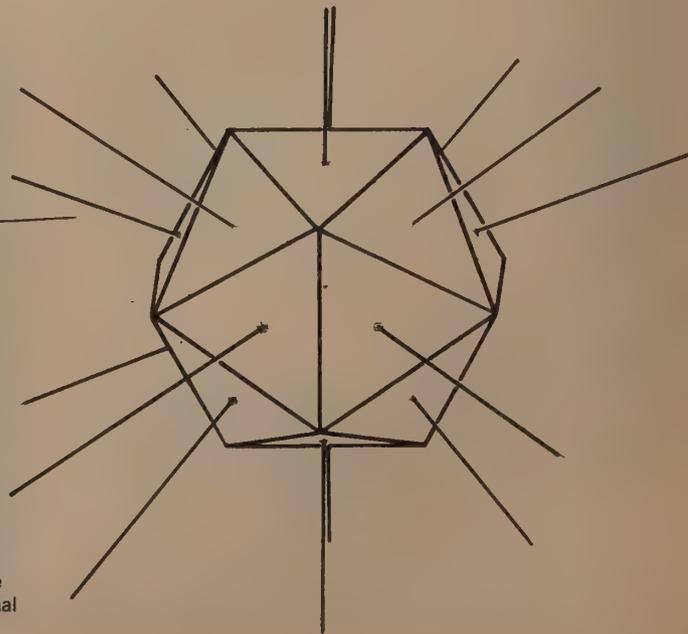
I believe that it is these five fold symmetries that have made the space grid designers shy away from the icosohedron. We came to use it by a most round-about route, and it took days before the significance of what we had before us became clear to me.

There are a group of simple geometric solids called zonahedra which H. S. Coxeter discusses in his book Regular Polytopes and also in a chapter of the book Mathematical Recreations and Essays. Two of the simplest of these zonahedra are the triacontahedron and the enneacontahedron. Zonahedra are related to bristles of lines called stars. Each zonahedron has one star associated with it and each star one zonahedron.

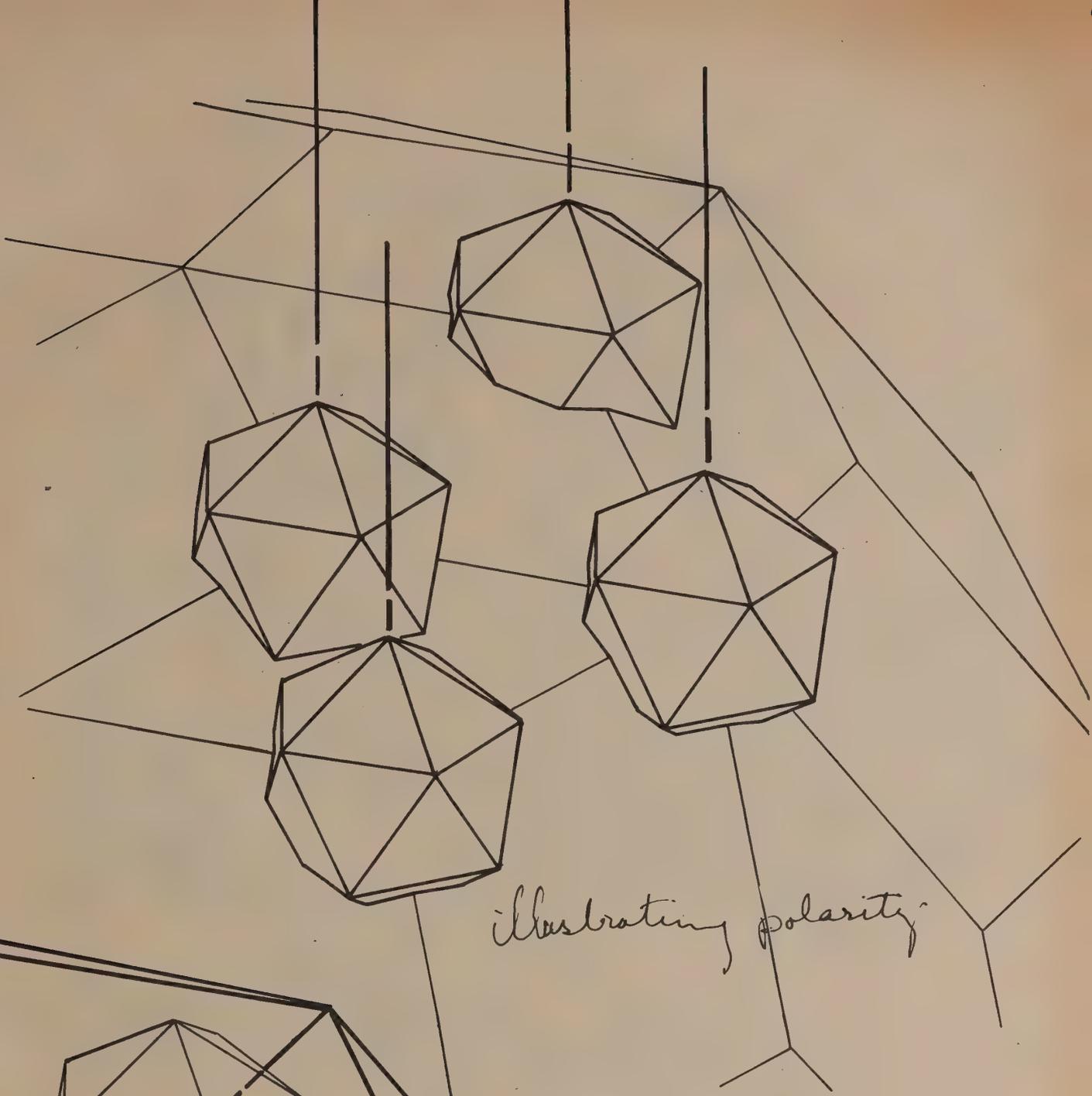
What kind of joints would you use in constructing an enneacontahedron? What angles do the edges make when they come together? But let's turn it around—don't think of the angles made by lines think of what made the lines. They sprouted out of the icosohedron. This is the obvious joint to use for connecting these edge members—let them go back home into the icosohedron.



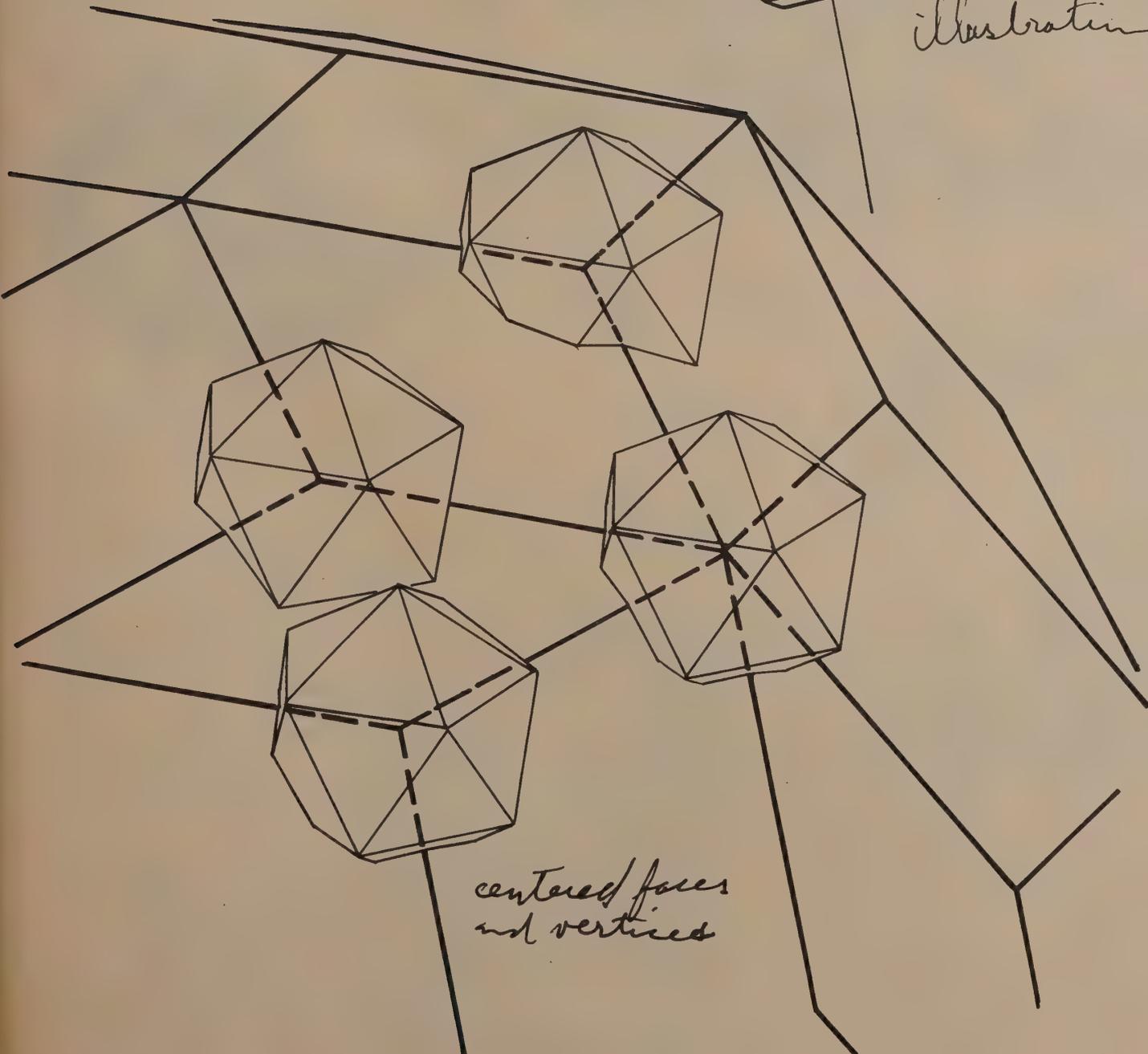
The triacontahedron is the zonahedron associated with the star formed by joining the midpoints of opposite pentagonal faces of a dodecahedron.



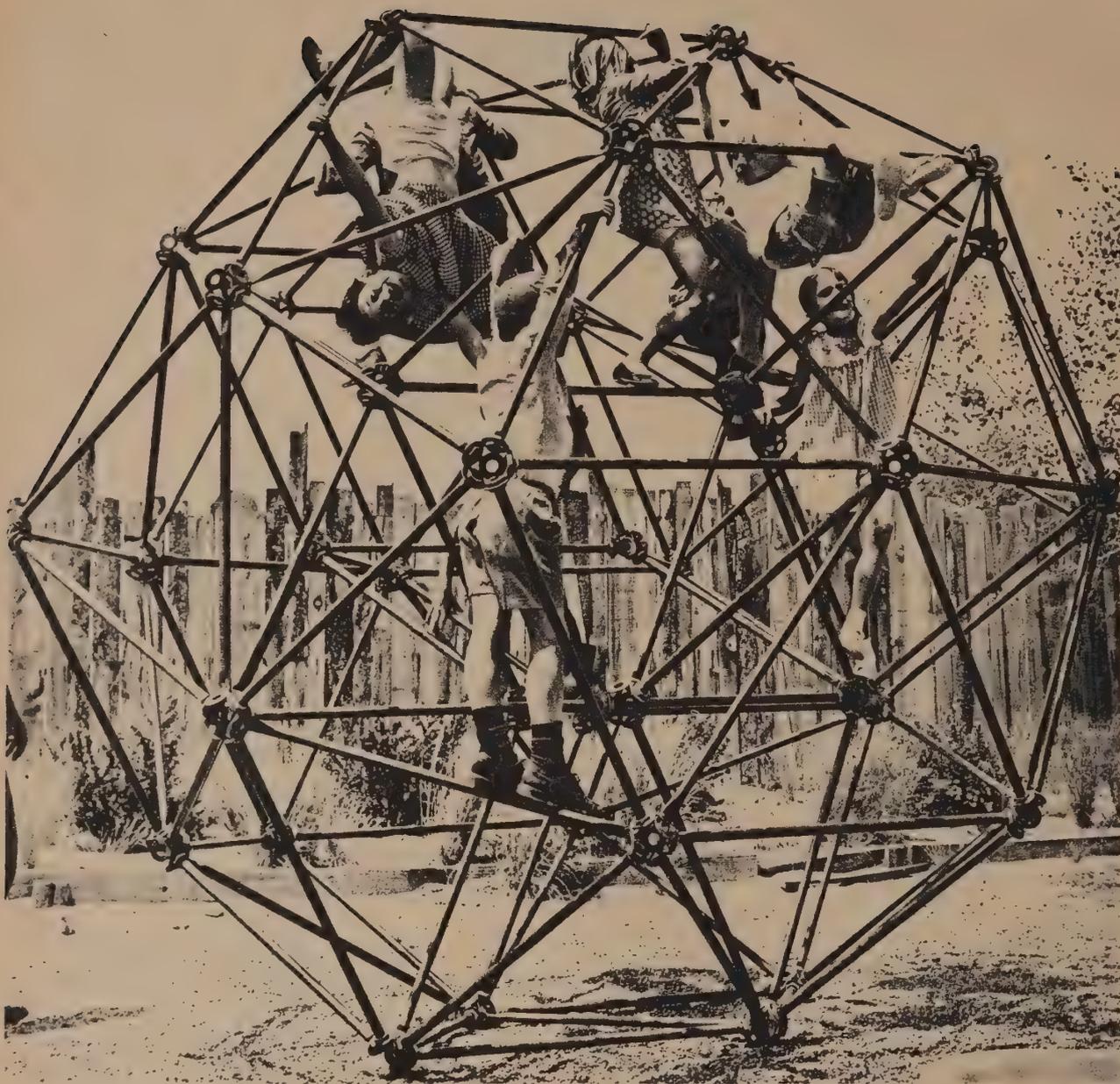
Here is an illustration of the enneacontahedron with icosahedra positioned at the vertices. All the icosahedra are oriented the same way. They are shown at the vertices of the enneacontahedron to illustrate that the icosahedron has a face perpendicular to each edge of the enneacontahedron. As you move from corner to corner of the enneacontahedron new sets of faces of the parallelly oriented icosahedra are taken by the edge members but it always works, the faces of the icosahedron are always correctly oriented to match the edges at the corners of the enneacontahedron.



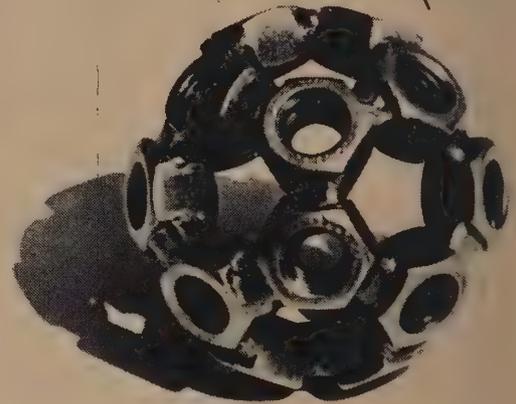
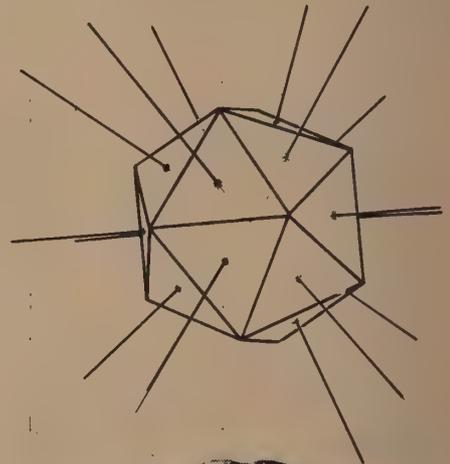
illustrating polarity



*centered faces
and vertices*

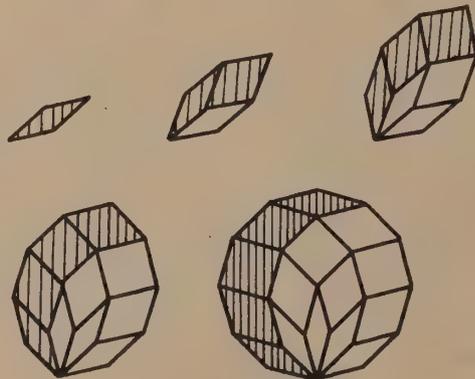


The three acute angles formed between any particular direction (the tall rod) and the adjacent rods (one away). This angle is $41^{\circ} 48'$



Screwball Connector

In our Corporation, Zomeworks, we needed a product that was easy to build, required little tooling costs, and exhibited the geometries we are investigating. H. S. Coxeter remarks on page 143 of *Mathematical Recreations and Essays* that zonahedra can be dissected into multitudes of six-sided cells. (Footnote: Where the zonahedra has n zones then there will be $1/6 n(n-1)(n-2)$ or one cell for every combination of three different zones.) This sounded like a promising shape for a new kind of jungle gym. We built a thirty-sided triacontahedron with its interior subdivided into $1/6(6)(6-1)(6-2) = 20$ cells. For the joints we used 1" washers welded together in a dodecahedron with $3/4$ " pipes poking through the holes in the washers.



As soon as we finished with one of these I became obsessed with the notion of building the larger ennecontahedron—90 sides, 10 zones and therefore $1/6(10)(10-1)(10-2) = 120$ component cells. Buck Dant built the outer ennecontahedron shell and then began the attempt to divide it into its 120 component cells. But how were we to position these new 84 joints and 280 edges so that this perfect packing of 120 cells into this round-shaped ennecontahedron would take place? It was clear that all the joints dividing the ennecontahedron into cells, the joints connecting the 280 internal edge members were all icosohedral, the edges forming the internal cells are always parallel to edges on the outside of the ennecontahedron so they are connected by the same kinds of joints oriented in exactly the same way, like a school of fish all looking in the same direction.

I saw how to subdivide the ennecontahedron into its component cells when I saw that the complete figure was the result of successive caps of layers of cells and each cap is created by the existing figure sprouting a new zone, each joint on one side of itself producing a new edge length all of them pointing in the same direction.

Once this is clear you can work backwards from the finished figure. From one side of the figure you drop an edge length into the figure, and reproduce the surface it dropped away from on the inside of the ennecontahedron. You then have a cap covering a lense-shaped polyhedron; the two of them together making up an ennecontahedron.

After looking at this cap inside the ennecontahedron for a couple of days I realized that we had made a truss. In its first form it wasn't a rigid truss because it had no triangles in it. If you are working strictly within a zonal system triangles are impossible since they kill zones—there is no parallel side across the polygon for the zone to continue. But we need to triangulate the structure in order for it to be rigid—this means that we must introduce members which are not part of the zone system.

This is a shame. The system proves so simple and flexible, being able to make different shapes of different sizes and even being able to produce a cap of cells anywhere on its surface—something temptingly close to a truss system. But it is all worthless if there is not some simple way to make it stiff.

The answer is very simple—every side of every figure made within this system is a diamond and there are only two kinds of diamonds present.

If something is simple it is usually disposed of by a simple short explanation, but something strange often happens when we are presented with something that is both simple and extensive—a new powerful system. You get a feeling like vertigo, it causes your mind to clamp down and move from one consequence to the next very slowly. This laboriously slow progress from one simple and obvious conclusion to the next set beside the short explanation which leaps from one step to the next is discouraging.

Why is it simple? Why are there only two kinds of diamonds possible? To make a variety of different diamonds we need a number of different angles to use at the corners of the diamonds, to send the edges off in new different directions. There are twenty ways to leave an icosohedral joint so it would seem there would be many angles to choose from.

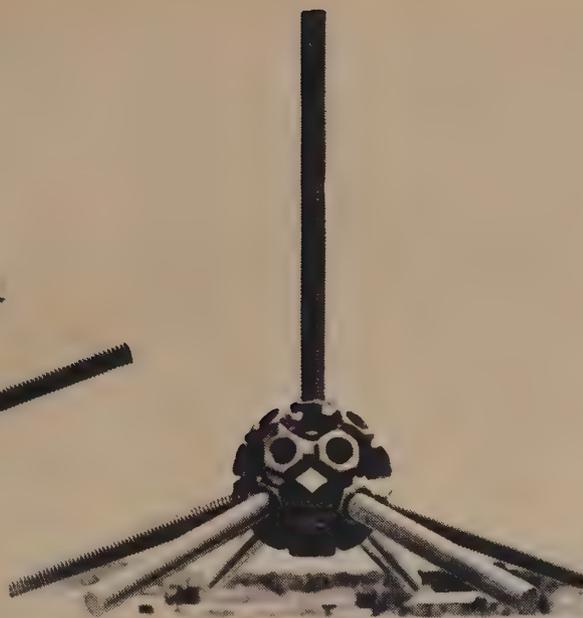
A random arrangement of twenty directions leaving one pt.—for instance a clay ball with twenty sticks stuck in it—will make a total of $\frac{20 \times 19}{2 \times 1} = 190$ different angles. Because of

multiple symmetries instead of there being 190 different angles there are only five, one of which is 180 degrees.

Since there are only two kinds of diamonds any structure made with this system can be triangulated with two different lengths of diagonals. One which crosses the $70^{\circ} 32' - 109^{\circ} 28'$ diamond and one which crosses the $41^{\circ} 48'$ and $138^{\circ} 12'$ diamond.



The six acute angles made with rods that are two away. $70^{\circ}32'$.



The six obtuse angles made with rods that are three away. $109^{\circ}28'$.



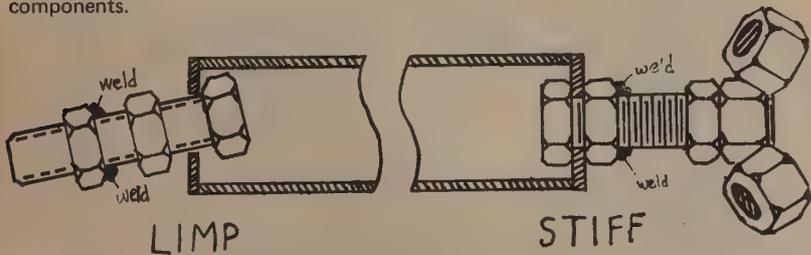
The three obtuse angles made with rods that are four away. $138^{\circ}11'$.



The one possible 180° angle.

These are the only five angles that can be made. A little quick addition shows that angles (1) and (4) are supplements and angles (2) and (3) are supplements. Because of this relationship all faces formed with this truss system are one of the two diamonds.

This simple joint is made with 20 hexagonal nuts welded together in the form of a truncated icosahedron. We saw this possibility in the hexagon pentagon pattern of the soccer ball and it has seemed to all of us a confirmation of the decazone truss that the joint—usually such a difficult problem—should be made so easily with a new arrangement of old components.



We accomplish the joining of an edge to the joint by means of the limp dick connector—I believe another new use of standard components.

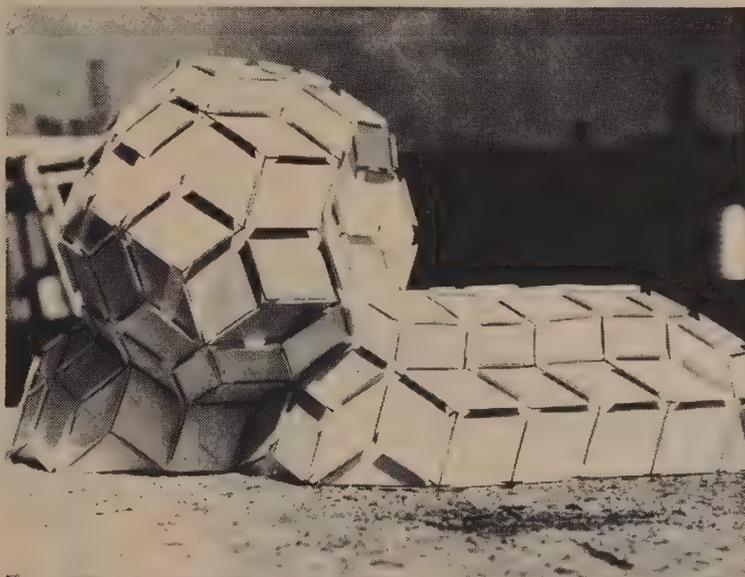
The diagonals always emerge conveniently over a weld halfway between two nuts and they are connected by means of a stiff flange welded at an angle to the end of the diagonal so that the flange may bolt to a nut and the diagonal come out at the correct angle.

Steve Baer

ZOMEWORKS HUMANUFACTORY

Box 445 — Corrales, N.M. 87048 / tel. (505) 898-3845

Diagrams: Ed Heinz



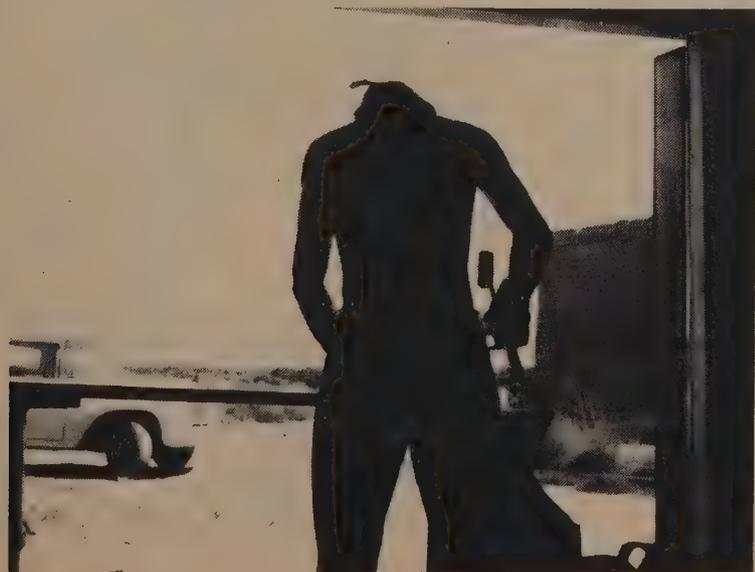
Cluster of three enneacontahedra fused through skew decagons.



How We Got the Name Screwball

Our jig makes these joints in two halves, of ten nut hemispheres. We had the problem of arc welding these halves together without fouling of the threads of the nuts with slag. One solution was to go to a wire fed MIG welder. Since we didn't have one we sent a Zomeworker over to the Fruehauf Trailer fabricating shop in Albuquerque, to check out the MIG welder. All the old welders over there were really turned on by these 20 nuts that were geometrically arranged into a beautiful sphere, but they didn't know what it was for. After a lot of jokes and welding shop comments, one old boy carefully conjectured, "Well, it looks like a screwball to me." And so it is.

Buck Dant

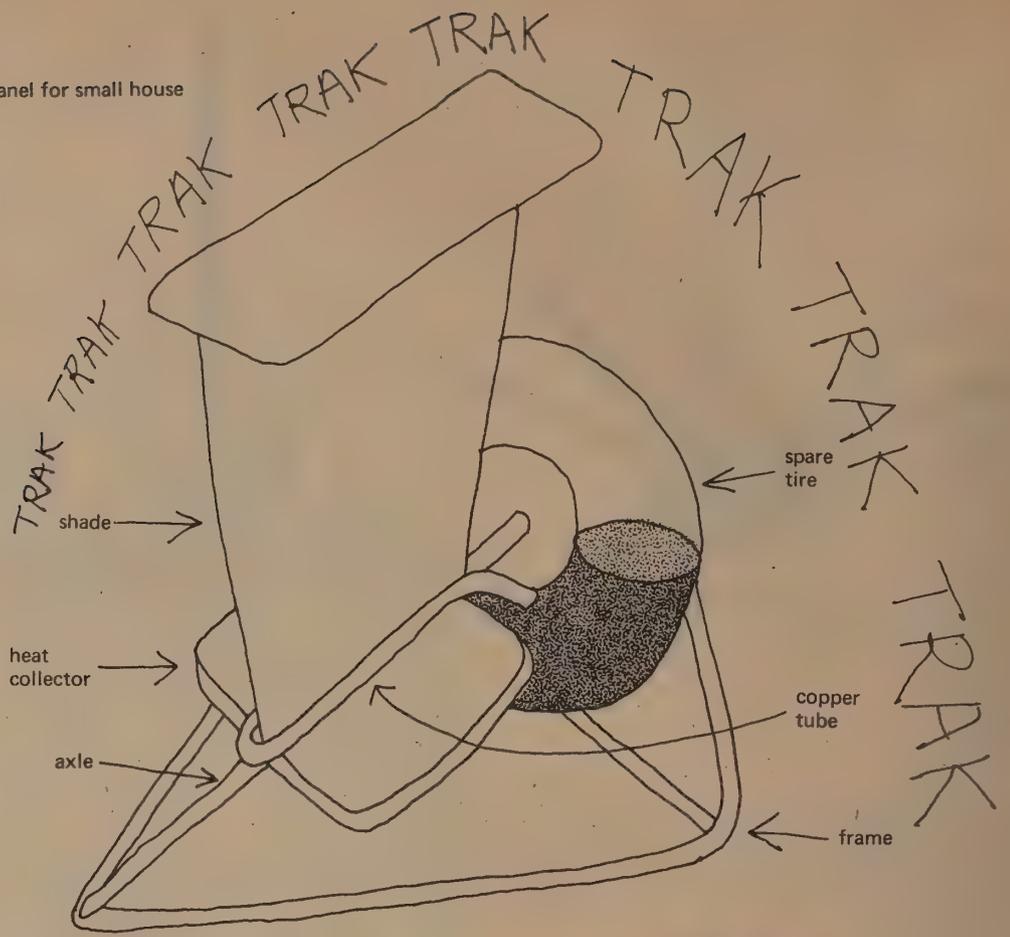
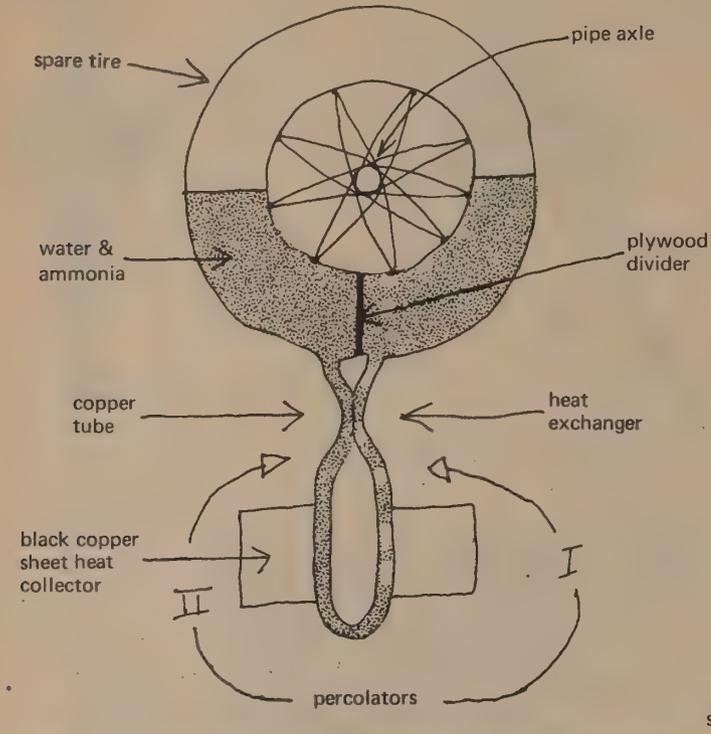


Sun Tracker

Disclosure by Day Charoudi

cost: \$20
capacity: solar heating panel for small house

- 1) heat boils off ammonia which percolates water from one side of divider to the other, causing the tire to rotate
- 2) the two percolators act in opposition
- 3) shade gives more sunlight to heat collector on sunny side so that tire always rotates toward the sun



Closed system percolator. Heat applied to right side of loop boils water higher in right side of U-tube.



Day Charoudi in Zomeworks laboratory.



Baer welding limp dick connectors.



First life-size look at the ten zone truss.

Movement

Everybody says *We Have To Work Together*, and it's true. The dents worth making in the world are usually more than an individual can manage. Okay so far. What gets sticky is sustaining over months a working relationship among entrepreneurial personalities; the self-assertion that fuels them tends in time to drive them apart (often to a bitter tune if expectations were utopian).

But temporary collaborations are entirely a different matter, jubilant music in fact. People who haven't seen one another in months, who respect each other's work, who know they have only a week or so together, can churn out a phenomenal amount of coherent work, not to mention mutual education.

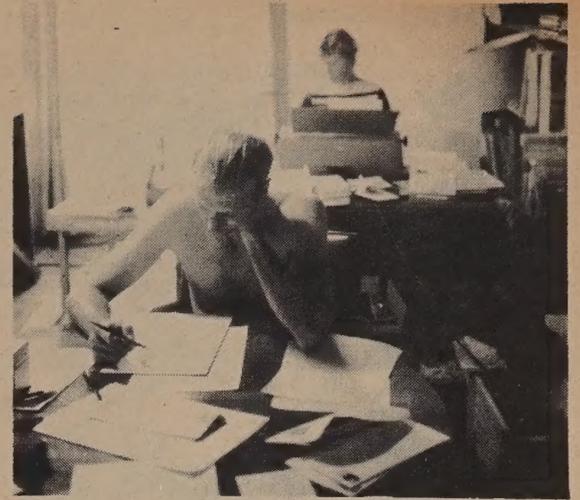
All you need is mobility, or, in terms of tools, portability. If you operate in an information net, it may have to track with you. For us, transporting *Supplement* production from California to New Mexico proved far easier than we expected. And instead of confining it's been liberating. We simply boxed up the Polaroid MP-3 camera and the IBM Selectric Composer. (IBM in Albuquerque was just as prompt as Menlo Park to repair the damned left margin) and Joe's light table and electric fry pan (and wax) and appropriate film and paper and rudimentary files and stationery, and pick-up trucked down to Albuquerque, travel trailer swaying along behind.

Hal and Diana stayed in Menlo Park to mind the store, mail, and telephone. They had the essential task of maintaining the income operation, the customer continuity we were vacationing from. They would pay the bills we were running up on our telephone credit card in the desert.

Our scene at Baer's isn't so much collaboration as working proximity. The Zomeworks Humanfactory occupies part of the house, and every day it is alive with hassle and invention—Day Charoudi prototyping a sun tracker that percolates torque, Buck Dant lightning welding hex-nut joints on the icosia jig, Ed Heinz rapidographing line-perfect diagrams, Berry Hickman and Baer trying to figure and perform a viable economy for the business.

Meanwhile in the living room we're regretting the shortage of extension cords because when everything's turned on, the circuit breaker goes. Production has never seemed easier. Wives are around sustaining the logistics. Conversation at meals is full of the morning or afternoon's accomplishment in what seems a whole complex of realms. There's a momentum, and we feel almost at rest in it.

There are problems of course. It's crowded sometimes. Zomeworks is weathering some crises and making some hard decisions. The CATALOG crew is reeling under phone reports of worldly success ("52 subscriptions today"). Here we are in the sticks and there's more happening than ever in town. The richness is greater than just the brute stimulus to the brain of a strange working environment. It's like we're another kind of city, bite-size. The slightly modified soup we eat daily at lunch is referred to as the July Soup. This is July Soup we're in, nutritious and flavorful, and here comes August: something else, somewhere else.



Baer living room



Zomeworks studio



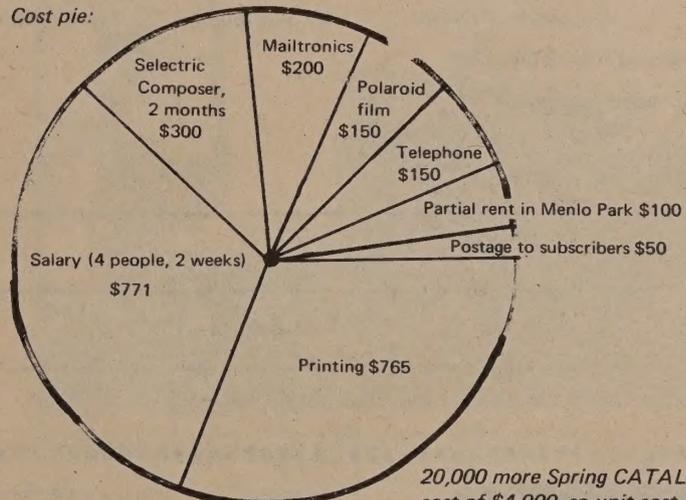
Breezeway lunch

Supplement Costs

Estimated cost of preparing 10,000 July Supplements: \$2,486.

Unit cost therefore is 25¢.

Cost pie:



Travel not included.

20,000 more Spring CATALOGs are being printed at a cost of \$4,000, so unit cost on the CATALOG is going down from 80-90¢ to 50¢.

CATALOG Distribution

We announced in the Spring CATALOG that we are in the market for a national distributor. Yesterday we found out to our surprise that we aren't. What happened was World Publishing called with a good offer (near \$1.20/CATALOG; they print and distribute: we continue to publish; pretty good deal). After two hours of laminar (non-turbulent) discussion among ourselves, we decided that we would 1) probably do better economically dealing straight with local distributors, 2) feel better doing that. It means fewer middlemen, shorter lag in our responses, and we are in more educational space.

So, what we are in the market for is more LOCAL distributors. Terms are: CATALOGs (\$4) and Supplements (\$1) are available at 50%, sold at about 40%, distributor pays the shipping from us to him (carrier his choice). Returns in saleable condition within 6 months are good for credit.

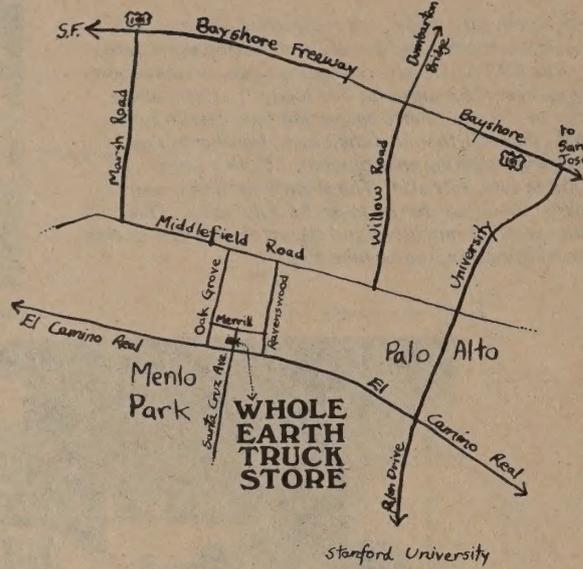
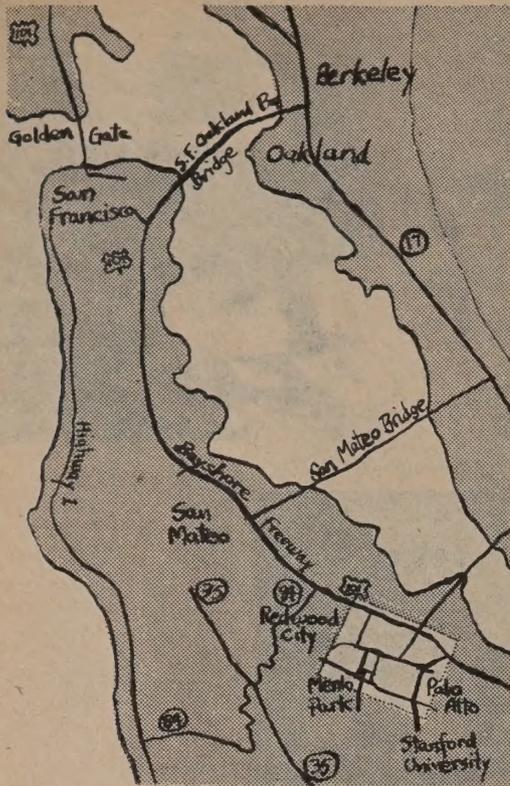
At this writing (July 15) our distributor in the Bay Area (Book People) is moving 500 CATALOGs a week. Dealers who want to carry the CATALOG should bug their local distributor or order from:

Book People
2010 7th Street
Berkeley, CA 94710
(415) 549-3033

Dealers on the
East Coast
(especially
Manhattan)
can try:

Alpha Book Distributors
59 4th Street
New York, N. Y. 10003
(212) 533-3200

Whole Earth Truck Store



A major research source of ours is the Menlo Park Whole Earth Truck Store, which stocks most of the items in the CATALOG. We see who's buying what. We hear complaints and suggestions. We try out items that might be in the next CATALOG. We have a place where friends can come and see what's happening.

Hours: Monday—Thursday, 11 am - 6 pm
 Friday, 11 am - 9 pm
 Saturday, 10 am - 3 pm
 558 Santa Cruz, Menlo Park, CA, 94025
 Phone: 415 323-0313



send to: **WHOLE EARTH CATALOG**
 Portola Institute
 558 Santa Cruz, Menlo Park, California 94025

_____ amount enclosed

- \$4 One issue of CATALOG ___ Fall ___ Spring
- \$8 One year subscription: two CATALOGs and four Supplements
- US and Canada starting ___ Fall CATALOG ___ Jan Supplement ___ March Supplement
- \$9 surface elsewhere; \$14.60 air elsewhere ___ Spring CATALOG ___ July Supplement ___ Sept Supplement
- \$25 One year Retaining Subscription
- \$100 One Year Sustaining Subscription

zip

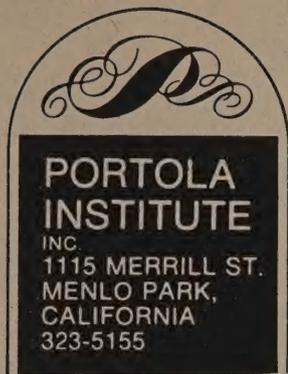


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The Whole Earth Catalog is one division of **PORTOLA INSTITUTE, INC.** Other present activities of the Institute include

Computer education for all grade levels



Robert Albrecht, two members of the Computer Club, and two Commodore calculators.

Simulation games for classroom use



Dennis Dobbs, the Pacific ocean, and a class on the beach of simulation Atlantis.

Ortega Park Teachers Laboratory



Ortega Park Teachers Laboratory, one teacher, one student, and 70 acres of redwoods.

PORTOLA INSTITUTE was established in 1966 as a nonprofit corporation to encourage, organize, and conduct innovative educational projects. The Institute relies for support on private foundations and public agencies, to whom specific project proposals are submitted.

Because Portola Institute is a private organization with no need to produce profits or guarantee "success", it can experiment with new and unusual educational projects that would be difficult to administer within more structured organizations. For this reason the staff and facilities of the Institute are deliberately kept small and flexible.

Within its framework a wide variety of projects dealing with innovative education can be created as people with ideas are able to interest people with funds. New projects are always being considered, both within the existing divisions and programs, and within as yet unexplored realms of the learning experience.

Portola Institute, Inc.
1115 Merrill Street
Menlo Park, CA
94025

More information on Portola Institute, please. Especially _____

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